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THE JOURNAL *of the* American
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Highest Earned Degrees of Faculty Members in Institutions of Higher Education in the United States, 1954-55*

WALTER CROSBY EELLS

I. INTRODUCTION

Importance

THE VICE-PRESIDENT of the Ford Foundation predicted recently that in 1970 the proportion of faculty members with earned doctor's degrees in American colleges and universities will be only half as great as it is today "unless there is some unforeseeable expansion of graduate schools."[1]

In order to make intelligent plans for such needed expansion of graduate schools and for numerous other purposes it is desirable to have more recent and more extensive information than is now available concerning the earned degrees held by faculty members in different types of higher educational institutions in the United States. It is the object of this study to present such information for almost 172,000 faculty members in more than 1,800 institutions of higher education classified by accreditation status, control, type, size, and geo-

* Appreciation is expressed to Mr. H. G. Badger, U.S. Office of Education, for suggesting the need for this study, for critically reading the manuscript, and for numerous helpful suggestions.

[1] Clarence H. Faust, "Rising Enrollments and Effective Use of Faculty Resources," *Association of American Colleges Bulletin*, 43:257, May 1957.

graphical location, and for certain special groups of these institutions; also to compare such conditions with those existing 16 years earlier.

This study is based on a detailed analysis of conditions in 1954-55 for publicly and privately controlled regionally and non-regionally accredited higher educational institutions, distributed as follows:

	Total	Regionally accredited	Non-regionally accredited
Publicly controlled	642	507	135
Privately controlled	1,159	728	431
Total	1,801	1,235	566

This study is based upon an analysis of a much greater number of faculty members in a far larger number of institutions than has ever before been made. For the first time it presents comparative data on a national scale separately for accredited and nonaccredited institutions. It gives extensive information on the proportion of faculty members holding various earned degrees, as has been done by other studies covering smaller numbers of individuals and institutions, but it also uses two new types of analysis and presentation: (1) a measure of the average years of preparation of faculty members above the baccalaureate level; and (2) a classification of *institutions,* rather than of individuals, with reference to the proportion of doctors on their faculties.

Sources of Information

The chief sources of information used were the latest editions of *American Universities and Colleges*[2] and *American Junior Colleges.*[3] The former volume gives detailed data regarding 969 4-year colleges and universities which were accredited in 1955 by recognized regional accrediting agencies. In each case the institution was asked to report the total number of faculty members in 1954-55 and the number holding the doctor's, master's, bachelor's, or a professional degree as their highest earned degree.[4] The latter volume gives similar descriptive

[2] Mary Irwin, editor, *American Universities and Colleges,* Seventh edition. Washington: American Council on Education, 1956. Pp. 1210.

[3] Jesse P. Bogue, editor, *American Junior Colleges,* Fourth edition. Washington: American Council on Education, 1956. Pp. 584.

[4] Slightly more than one quarter (26 per cent) of the institutions reported professional degrees; somewhat more than one-third (36 per cent) appear to have faculty members with no degrees. This number might have been somewhat larger had this item been specifically requested from the reporting institutions.

data for 531 2-year institutions, but is less selective, being based primarily on state accreditation rather than regional accreditation. The junior colleges were asked to report the same information regarding faculty members except that number of professional degrees was not requested.

For 26 of the institutions represented in *American Universities and Colleges* no data were reported regarding the highest degrees held. Some of these were comparatively small institutions, but 12 of them were large universities with more than 700 faculty members each.[5] The total number of faculty members in 1954-55 in these 12 universities was 18,686. It is unfortunate that lack of information on degrees held by these individuals necessitated omission of them from the study. It is reasonable to assume that these universities have more than the average proportion of doctors on their faculties.

For 212 institutions the number of degrees reported was less than the total number of faculty members reported. In more than two-thirds of these cases the difference was less than 10. In each such case it was assumed that the difference represented individuals without a baccalaureate degree, including perhaps instructors in such non-academic fields as music, art, or physical education.

A more difficult problem was presented by 22 institutions in which the totals for the four types of degrees exceeded the total number reported. In two-thirds of these cases, also, the difference was less than 10. In each of these cases the totals as reported by the institutions was increased enough to make it correspond with the totals reported for the four types of degrees.

In most institutions, the figures are given for full-time and part-time faculty combined. In some instances, however, degrees of full-time faculty only were indicated. In either case the data as published in the two volumes were used.

In the case of *American Junior Colleges* there were 15 institutions for which the necessary data were not given. Of the remainder, 291 were accredited by regional accrediting agencies; 225 had state accreditation only. In a few cases of branch institutions, the data on faculty in the branches which were classified separately as junior colleges may be duplicated in the report for the parent institutions as given in *American Universities and Colleges*. No effort was made

[5] Universities of California, Chicago, Cincinnati, Columbia, Harvard, Michigan, Minnesota, Missouri, Ohio State, Rutgers, Stanford, and Washington (Seattle).

to identify and eliminate the probably small number of such possible duplications. All available data on degrees held for the institutions reported in *American Junior Colleges* were used in the sections devoted to 2-year institutions.

Recent Directories of the U.S. Office of Education do not list junior colleges separately, but include them in the more general classification of 2-year institutions. These include technical institutes, normal schools, and a few other institutions, but more than 90 per cent of them are junior colleges.[6] The designation "junior colleges" therefore is not used in any of the tables of this study, but results for this large and increasingly important group of institutions are probably not essentially different from those reported for 2-year institutions.

The U.S. Office of Education's *Educational Directory, 1955-56* lists 1,855 institutions of higher education. A check of these with those listed in *American Universities and Colleges* and *American Junior Colleges* shows 455 institutions which were not included in either of these volumes and therefore may be classified as "nonaccredited." Catalogues of 393 of these nonaccredited institutions were available for examination in the library of the U.S. Office of Education. Of these, 52 contained no information on degrees held by their faculty members. From the catalogues of the remaining 341 institutions, highest earned degrees held by their faculty members were tabulated. To these were added the 225 state-accredited junior colleges listed in *American Junior Colleges,* making a total of 566 non-regionally accredited institutions information for which is separately tabulated in Tables II and IV of this study. Data of this type on a national basis for nonaccredited institutions have never before been collected and published.

Other Related Studies

A number of other studies of earned degrees of faculty members somewhat similar in nature to the present one but less extensive in scope and less recent in coverage have been made in the past few years. The more important of these may be mentioned briefly.

(a) *State or special group studies.* A score or more of recent state surveys of higher education or of education in special groups of insti-

[6] The 1955-56 *Directory* lists 462 junior colleges, 24 normal schools and 2-year teachers colleges, 11 technical institutes, 7 Bible institutes, and 6 other institutions, totaling 510.

tutions, such as schools of pharmacy, have included more or less detailed data on highest degrees of faculty members of higher educational institutions within a single state or other limited group of institutions.[7]

(b) *National Education Association.* The study by the National Education Association[8] covers 58,719 full-time members of the instructional staffs of 637 institutions, without reference to their accreditation status, in 1953-54. The basic classification is in four groups, with the percentages indicated: doctor's degree, 40.5 per cent; master's degree, plus at least one year, 20.9 per cent; master's degree only, 28.2 per cent; less than master's degree, 10.4 per cent. Results are reported separately for nine groups of institutions; state universities, non-public universities, municipal universities, land-grant colleges, state colleges, teachers colleges, and non-public colleges in three groups—small, medium, and large. Results also are reported separately for the four levels of academic rank, the doctor's degree, for example, being held by 71.4 per cent of the professors, 46.4 per cent of the associate professors, 29.7 per cent of the assistant professors, and 11.0 per cent of the instructors. Similar data are given for the other types of degrees held. This is the most comprehensive of the three main studies here summarized, but it covers less than half of the 4-year institutions of the country and none of the 2-year ones. No comparisons are made with conditions in earlier years.

(c) *North Central Association.* The North Central Association study[9] is based on data concerning "about 30,000 teachers in colleges and universities of all types—probably the largest faculty sample for which individual data have ever been compiled."[10] Data are given for 1952-53 for 330 regionally accredited institutions classified in 12 groups, as follows: public junior colleges, private junior colleges,

[7] For references to those published since 1945 and brief annotations concerning them, see Walter Crosby Eells, *College Teachers and College Teaching.* Atlanta, Georgia: Southern Regional Education Board, 1957, pp. 64, 77. Also S. V. Martorana, "Consideration of 2-Year Colleges in Recent Statewide Studies of Higher Education," *Higher Education,* 14: 46-50, November 1957.

[8] "Instructional Staff Practices in Degree-Granting Institutions, 1953-54," *NEA Research Bulletin,* 32:158-214, December 1954.

[9] Manning M. Pattillo, Jr., and Allan O. Pfnister, "Faculty Training and Salaries in Institutions of Higher Education," *North Central Association Quarterly,* 29: 374-404, April 1955.

[10] The authors evidently overlooked or were not familiar with the NEA study, covering almost 60,000 faculty members, published four months earlier.

public colleges primarily undergraduate, Roman Catholic colleges, private colleges not church-related, Protestant-related colleges, public colleges with graduate departments, public universities of medium scope, private universities of medium scope, complex public universities, complex Roman Catholic universities, and separate technological institutions. The study covers 29,452 faculty members with the following distribution of highest earned degrees: doctor's, 36.1 per cent; master's, 47.5 per cent; bachelor's, 9.4 per cent; other degrees, 5.8 per cent; no degree, 1.2 per cent. Results are also reported separately for the four levels of academic rank, the doctor's degree, for example, being held by 62.8 per cent of the professors, 45.5 per cent of the associate professors, 31.2 per cent of the assistant professors, and 9.1 per cent of the instructors. It should be noted that the distribution includes faculty members with "other" degrees and with no degree, so that direct comparisons are possible with the present study, but comparisons with the National Education Association study, just described, are not feasible since the basic classification plan is different. The definitions and examples of "other degrees" in the North Central Association study show that this classification corresponds very closely to the classification "professional degrees" as used in *American Colleges and Universities* and in the present study. A special feature of the North Central Association study is an analysis by major fields of instruction. The highest percentage holding the doctorate are found in history, the lowest in English.[11] These departmental percentages are also shown for each of the 10 major groupings of institutions. The North Central Association study is unique in its analysis of teaching fields, but it is limited to regionally accredited institutions only, and these are located in a single section of the country.

(d) *American Association of Junior Colleges.* The study made by the American Association of Junior Colleges is based on 8,798 instructors in junior colleges in 1954-55.[12] For 6,985 instructors in publicly controlled junior colleges it shows 7.2 per cent with doctor's

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[11] History, 75.5 per cent; psychology, 75.2 per cent; chemistry, 74.8 per cent; biology, 71.0 per cent; political science, 66.9 per cent; physics, 65.0 per cent; economics, 56.6 per cent; education, 54.2 per cent; mathematics, 50.5 per cent; English, 41.7 per cent.

[12] Clyde C. Colvert, "Professional Development of Junior College Instructors," *Junior College Journal,* 25: 474-478, April 1955.

degrees; 68.5 per cent with master's degrees; 17.9 per cent with bachelor's degrees; and 6.5 per cent with no degrees. For 1,813 instructors in privately controlled junior colleges, it shows 7.7 per cent with doctor's degrees; 62.9 per cent with master's degrees; 26.7 per cent with bachelor's degrees; and 2.7 per cent with no degrees. Unlike the other studies summarized above, the junior college study makes comparisons with three earlier studies, one based on 6,164 instructors in 1953, one on 292 instructors in 1922, and the earliest on 523 instructors in 1918. Not all of these studies, however, are on a strictly comparable basis. Colvert states that in the junior colleges under public control in 1954-55, approximately one-third of the instructors with master's degrees had at least 30 semester hours or more of graduate work beyond that degree; for junior colleges under private control, between 25 and 30 per cent. These figures may be compared with the National Education Association report of percentage of faculty members having the master's degree plus one year of graduate work.

II. ANALYSIS BY CONTROL AND TYPE

Distribution of Highest Earned Degrees

Accredited Institutions. Table I exhibits the percentages of the highest earned degrees held by 152,893 faculty members in 1,235 regionally accredited institutions of higher education. The institutions in this and later tables are classified in the seven standard groups of publicly controlled and privately controlled institutions which the U.S. Office of Education has used in its *Biennial Surveys* (beginning in 1952) and in other publications, viz.: universities, technical schools, theological schools, other professional schools, liberal arts colleges, teachers colleges, junior colleges and normal schools.

In some cases, in the present study, subdivisions of some of these groups have been made for greater interest, clarity, and significance. Thus in Table I, the very large group of 523 private liberal arts colleges has been subdivided into Roman Catholic, Protestant, Jewish, and nondenominational institutions, with a further subdivision of the Protestant group for denominations having 10 or more institutions each, using the denominational affiliations as given in *American Universities and Colleges.*

In Table I, summaries are shown separately for publicly and pri-

TABLE I

PERCENTAGE DISTRIBUTION OF HIGHEST EARNED DEGREES OF FACULTY MEMBERS IN REGIONALLY ACCREDITED INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES, BY CONTROL AND TYPE OF INSTITUTION, 1954–55.

Group	Institutions	Faculty members	Percentage having					Average years of preparation above baccalaureate
			Doctor's	Master's	Bachelor's	Professional	None	
PUBLIC INSTITUTIONS								
Universities	75	39,804	39.8	36.4	12.3	10.5	1.0	1.90
Technical schools	15	2,149	19.5	42.7	34.5	1.1	2.2	1.18
Other professional schools	1	80	25.0	52.5	15.0	5.0	2.5	1.56
Liberal arts colleges	73	9,331	37.0	50.2	8.2	2.3	2.3	1.84
Teachers colleges	156	11,886	29.9	63.2	5.1	0.7	1.1	1.78
PUBLIC 4-YEAR INSTITUTIONS	320	63,250	36.8	43.8	11.1	7.1	1.2	1.85
2-Year institutions	187	10,910	8.2	55.6	20.8	0.0	15.4	0.87
ALL PUBLIC INSTITUTIONS	507	74,160	32.6	45.5	12.5	6.1	3.3	1.70
PRIVATE INSTITUTIONS								
Universities	54	36,849	46.0	25.4	9.8	15.6	3.2	2.02
Technical schools	14	3,518	39.2	30.3	22.7	4.0	3.8	1.64
Theological schools	5	126	53.0	34.9	8.7	2.4	0.8	2.12
Other professional schools	16	1,656	45.8	15.9	15.9	9.4	13.0	1.65
Liberal arts colleges	523	32,437	33.8	46.9	14.1	3.6	1.6	1.73
Roman Catholic	149	8,897	25.6	50.7	18.2	4.3	1.2	1.55
Protestant	283	15,418	33.3	49.5	12.7	3.0	1.5	1.74
Methodist	70	4,205	31.9	49.8	12.7	3.8	1.8	1.71
Presbyterian	60	2,902	32.3	50.0	13.0	3.4	1.3	1.72
Baptist	41	2,448	37.8	47.8	10.1	2.5	1.8	1.84
Lutheran	26	1,578	28.6	52.9	16.2	2.2	0.1	1.64
Congregational	17	860	38.5	44.2	11.0	2.9	3.4	1.80
Other Protestant	69	3,425	33.5	49.6	13.2	2.6	1.1	1.74
Jewish	3	278	59.0	18.7	10.5	8.6	3.2	2.17
Nondenominational	88	7,844	43.2	38.4	12.3	3.7	2.4	1.88
Teachers colleges	13	514	30.9	50.6	12.1	6.4	0.0	1.76
PRIVATE 4-YEAR INSTITUTIONS	625	75,100	40.3	34.9	12.4	9.7	2.7	1.86
2-Year institutions	103	3,633	10.1	51.2	27.5	0.0	11.2	0.91
ALL PRIVATE INSTITUTIONS	728	78,733	39.0	35.6	13.1	9.2	3.1	1.82
ALL 4-YEAR INSTITUTIONS	945	138,350	38.7	38.9	11.8	8.5	2.1	1.85
ALL 2-YEAR INSTITUTIONS	290	14,543	8.7	54.5	22.4	0.0	14.4	0.88
ALL ACCREDITED INSTITUTIONS	1,235	152,893	35.9	40.4	12.8	7.7	3.2	1.76

vately controlled institutions, and for 4-year and 2-year institutions, since there are significant differences between these groups. The table is self-explanatory, except for the last column.

Formula for Average Preparation. The last column of Table I is based upon a formula devised by the author to secure a simple measure of the average amount of academic preparation, beyond the baccalaureate level, possessed by faculty members in the different groups. It combines the percentages of doctor's, master's, bachelor's, and professional degrees and those with no degree into a single figure. It is based upon the use of the following weights for the various de-

grees, indicative of the normal number of years spent in advanced study above the baccalaureate level:

Doctor's degree	3
Professional degree	2
Master's degree	1.4
Bachelor's degree	0
No degree	−1

The weight for the master's degree was secured by combining the data given above in the National Education Association study with reference to the distribution of master's degrees. That study reported that 20.9 per cent had the master's degree and one full year of study beyond, that 28.2 per cent had the master's degree only. An appropriate combination of these two percentages gives the weight of 1.4 as used in the formula.[13] A similar treatment of the data reported in the study of the American Association of Junior Colleges would give a value of 1.3, but 1.4 is to be preferred because it is based on a greater variety of institutions as well as a larger number of them. The junior college value, however, tends to corroborate the 1.4 value used. More difficulty was found in deciding upon an appropriate weight for professional degrees since these vary all the way from the level of the bachelor's degree to that of the doctorate or higher. On the whole, however, it seemed that the value should be greater than for a master's degree but less than for the doctorate, hence the weight of 2 was selected. In any case the proportion with professional degrees is so small, less than 8 per cent, that in most cases no material differences in the final value given by the formula would result if a slightly different weight were given for a professional degree.

The use of this formula will enable the administrator of any institution to compute the corresponding average years of preparation beyond the baccalaureate for his own faculty and to make instructive comparisons with the norms for the appropriate types of institutions as shown in the last column of Table I. It should be noted, however, that these values are all norms, not standards. They report the average preparation as actually found with no implication of what it should be.

For comparisons it may be noted that if an institution's faculty were composed entirely of doctors the value given by the formula would be 3.00; if entirely of masters, it would be 1.40; if entirely of bache-

[13] $(20.9 \times 2) + (28.2 \times 1) / (20.9 + 28.2) = 1.43$ years.

lors, it would be 0.00. Values actually reported vary from 0.87 years to 2.17 years. Most groups, except the junior colleges, have average preparation above the master's degree level but in many cases the superiority is hardly as great as might be desired.

An examination of the summaries of Table I shows that privately controlled institutions have distinctly better prepared faculties than those under public control whether judgment is based on proportion of doctors or on average years of preparation above the baccalaureate level.

Even more striking differences are found between 4-year and 2-year institutions. The former have more than 4 times the proportion of doctors and more than twice the average years of preparation found in the 2-year institutions.

Nonaccredited Institutions. Table II, for nonaccredited institutions, is constructed on exactly the same pattern as Table I, but for the 566 institutions that did not have regional accreditation in 1954-55. As might be anticipated, the accredited institutions show marked superiority to the nonaccredited ones, whatever measure of comparison is used. Just how great is this superiority can be seen by comparing any of the corresponding groups in Tables I and II. The accredited institutions have more than two and one-half times the proportion of doctorates. The distribution of degrees in the two types of institutions is shown graphically in Figure I.

Faculties of the accredited institutions average more than one and three-quarter years of preparation above the baccalaureate as compared with little more than a year for the nonaccredited ones. Many of the component groups show less than one year of such preparation.

For the large group of more than a hundred nonaccredited liberal arts colleges, the most probable future candidates for future regional accreditation, the proportion of doctors is only about half as great as for the accredited liberal arts colleges. Such information should be of distinct value to the administrators of small liberal arts colleges striving to bring their institutions up to a level that will warrant their accreditation by the appropriate regional association. Of course many other factors are also given consideration in the total accreditation process, but one of the most important is the competence of the faculty. Number of doctors is invariably given much weight in judging such competence.

The superiority of the privately controlled institutions over those

TABLE II

PERCENTAGE DISTRIBUTION OF HIGHEST EARNED DEGREES OF FACULTY MEMBERS IN NONREGIONALLY ACCREDITED INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES, BY CONTROL AND TYPE OF INSTITUTION, 1954–55.

Group	Institutions	Faculty members	Percentage having					Average years of preparation above baccalaureate
			Doctor's	Master's	Bachelor's	Professional	None	
PUBLIC INSTITUTIONS								
Technical schools	2	167	23.3	47.9	20.4	4.2	4.2	1.41
Other professional schools	6	427	11.9	4.5	9.1	64.9	9.6	1.62
Liberal arts colleges	6	841	27.1	36.9	25.3	1.4	9.3	1.26
Teachers colleges	5	144	4.9	59.7	31.9	0.0	3.5	0.95
PUBLIC 4-YEAR INSTITUTIONS	19	1,579	20.6	31.4	21.0	18.7	8.3	1.35
2-Year Institutions	116	3,427	5.2	55.3	35.5	0.0	14.0	0.79
State accredited	109	3,278	5.3	57.2	25.0	0.0	12.5	0.83
No accreditation	7	149	3.4	14.1	35.5	0.0	47.0	−0.17
ALL PUBLIC INSTITUTIONS	135	5,006	10.1	47.7	24.1	5.9	12.2	0.97
PRIVATE INSTITUTIONS								
Technical schools	7	423	7.1	29.1	39.0	0.0	24.8	0.37
Theological schools	109	2,311	33.6	30.3	29.3	0.0	7.1	1.36
Theological seminaries	71	1,497	45.9	26.1	24.1	0.0	3.9	1.70
Bible institutes	38	814	10.9	37.2	39.0	0.0	12.9	0.72
Other professional schools	69	4,678	10.7	14.1	17.2	50.1	7.9	1.44
Medical	29	2,880	9.2	4.4	4.2	81.4	0.8	1.96
Art and music	17	519	2.7	24.1	30.4	0.0	42.8	−0.01
Other	23	1,279	17.2	31.8	41.2	0.0	9.8	0.86
Liberal arts colleges	106	3,411	17.8	52.7	26.4	0.0	3.1	1.24
Roman Catholic	36	1,026	20.4	52.9	24.5	0.0	2.2	1.33
Protestant	45	1,470	17.8	55.8	24.3	0.0	2.1	1.29
Methodist	12	442	23.5	51.4	24.0	0.0	1.1	1.41
Baptist	13	399	15.3	57.4	25.3	0.0	2.0	1.24
Other Protestant	20	629	15.3	58.0	23.8	0.0	2.9	1.24
Nondenominational	25	915	14.9	47.4	32.1	0.0	5.6	1.05
Teachers colleges	5	94	14.9	61.7	21.3	0.0	2.1	1.29
PRIVATE 4-YEAR INSTITUTIONS	296	10,917	17.6	30.5	23.6	21.5	6.8	1.32
2-Year institutions	135	2,835	7.8	46.0	33.2	0.0	13.0	0.75
State accredited	116	2,453	8.4	47.8	31.9	0.0	11.9	0.80
No accreditation	19	382	4.2	33.8	41.6	0.0	20.4	0.40
ALL PRIVATE INSTITUTIONS	431	13,752	15.6	33.8	25.5	17.0	8.1	1.20
ALL 4-YEAR INSTITUTIONS	315	12,496	18.0	30.5	23.3	21.2	7.0	1.32
ALL 2-YEAR INSTITUTIONS	251	6,262	6.4	51.1	29.0	0.0	13.5	0.77
ALL NONACCREDITED INSTITUTIONS	566	18,758	14.1	37.4	25.2	14.1	9.2	1.14
ALL INSTITUTIONS (Accredited institutions from Table I).	1,801	171,651	33.5	40.1	14.1	8.4	3.6	1.70

under public control among accredited institutions has already been pointed out. Similar superiority is found among the nonaccredited institutions, as Table II clearly shows.

On account of marked differences in the two main components of the theological schools, each component is shown separately. Thus it is seen that almost half the faculty members in theological seminaries

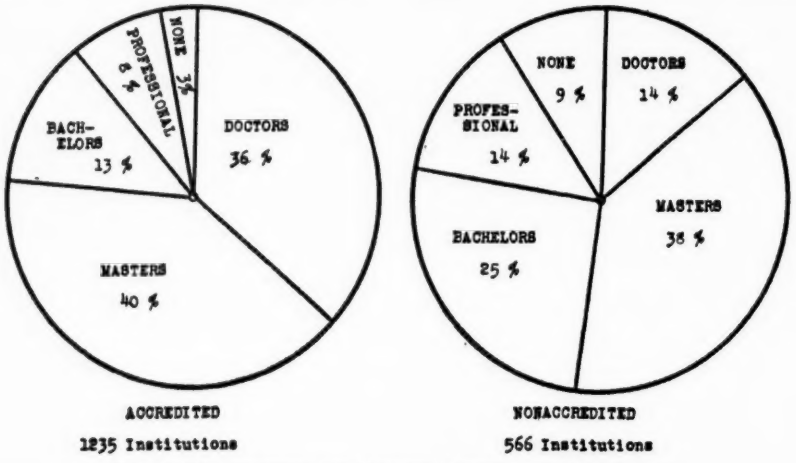

FIG. I. DISTRIBUTION OF EARNED DEGREES IN ACCREDITED AND NONACCREDITED INSTITUTIONS

have the doctorate as contrasted with only one-ninth of those in Bible institutes. This important difference is completely obscured when they are combined in a single group.

All Institutions Combined. The last line of Table II, "All Institutions," is derived by adding the data for the 1,235 accredited institutions of Table I to those shown for the 566 nonaccredited institutions of Table II, thus giving a single combined summary for the 171,651 faculty members in the 1,801 institutions covered by this study. This distribution of degrees for the entire group is presented graphically in the circular graph of Figure II.

Figure III shows an over-all comparison of the distribution of de-

FIG. II. DISTRIBUTION OF HIGHEST EARNED DEGREES IN 1801 AMERICAN INSTITUTIONS OF HIGHER EDUCATION, 1955 (171,651 faculty members)

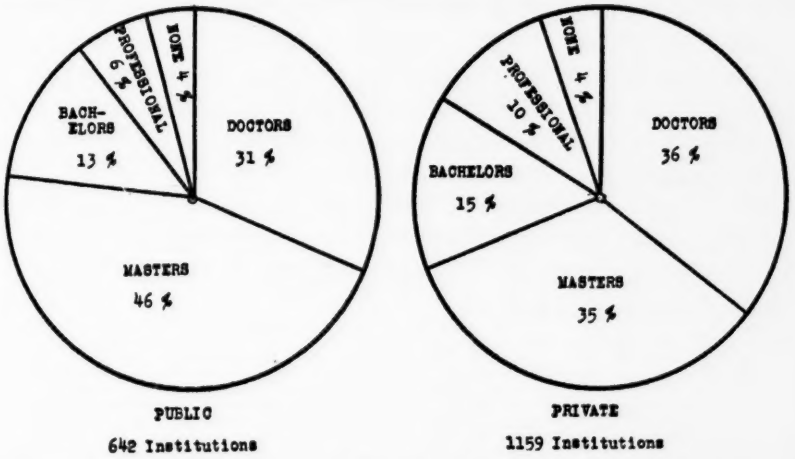

FIG. III. COMPARISON OF EARNED DEGREES IN PUBLIC AND PRIVATE INSTITUTIONS

grees between publicly controlled and privately controlled institutions, based upon a combination of the appropriate data from Tables I and II.

Similarly Figure IV exhibits an over-all comparison between 4-year and 2-year institutions.

Institutions by Proportion of Doctorates

Another method of studying some of the primary data which have been summarized in Tables I and II is that of tabulating the propor-

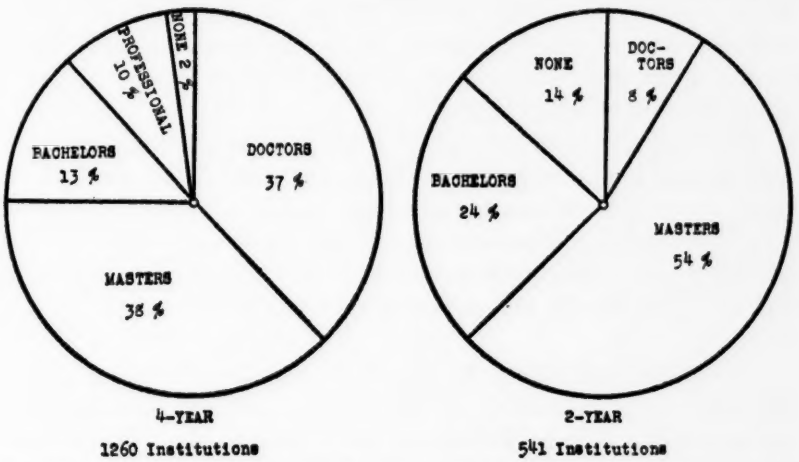

FIG. IV. DISTRIBUTION OF EARNED DEGREES IN 4-YEAR AND 2-YEAR INSTITUTIONS

tion of faculty members *in each institution* who hold an earned doctorate. This type of analysis recognizes particularly the fact that most of the regional accrediting associations recognize the possession of the earned doctorate as one very important measure of the training and competence of the faculty of a particular institution.

To measure this feature specifically, on an institutional basis, the 1,801 institutions under study have been grouped by the percentage of their faculty members who have earned doctorates. To show the relative number of doctors in each institution, they have been classified in five groups, as follows:

Class A:	75 to 100 per cent holding doctorates
Class B:	50 to 74 per cent
Class C:	25 to 49 per cent
Class D:	1 to 24 per cent
Class E:	no doctorates on the faculty

The results of this classification and analysis are presented in Tables III and IV for accredited and nonaccredited institutions respectively, the institutional classifications being the same as those of Tables I and II. It should be clearly understood, however, that Tables III and IV deal with numbers of institutions instead of numbers of faculty members, the subject matter of Tables I and II.

Perhaps the most striking facts shown in these two tables are found in the summary in the last line of Table IV, "All Institutions." This shows that in only one-twelfth of all institutions of higher education in the country do as many as half of the faculty members possess earned doctorates. On the other hand, there are more than 200 institutions, more than one-ninth of the total number, no one of which has a single doctor on its faculty.

The components of this grand total, however, include both accredited and nonaccredited institutions, 4-year and 2-year institutions, those under private control and under public control, and various more specialized groups, so that such generalizations while of some interest have comparatively little significance. Much more significant are the conditions in the various groups which make up this grand total.

Accredited Institutions. Among the accredited institutions (Table III) the 2-year institutions are markedly at variance with the other groups. None of these institutions has even half of its faculty com-

TABLE III

DISTRIBUTION OF REGIONALLY ACCREDITED INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES ACCORDING TO GROUPS OF FACULTY MEMBERS HOLDING EARNED DOCTOR'S DEGREES, BY CONTROL AND TYPE OF INSTITUTION, 1954–55.

Groups	Institutions	A 75–100%	B 50–74%	C 25–49%	D 1–24%	E None
PUBLIC INSTITUTIONS						
Universities	75	1	14	55	5	0
Technical schools	15	0	1	4	10	0
Other professional schools	1	0	0	1	0	0
Liberal arts colleges	73	1	10	29	33	0
Teachers colleges	156	0	5	87	64	0
PUBLIC 4-YEAR INSTITUTIONS	320	2	30	176	112	0
Percentages	100.0	0.6	9.4	55.0	35.0	0.0
2-Year institutions	187	0	0	2	141	44
ALL PUBLIC INSTITUTIONS	507	2	30	178	253	44
Percentages	100.0	0.4	5.9	35.1	49.9	8.7
PRIVATE INSTITUTIONS						
Universities	54	3	12	25	14	0
Technical schools	14	1	1	8	4	0
Theological schools	5	0	2	3	0	0
Other professional schools	16	1	0	1	12	2
Liberal arts colleges	523	5	56	283	178	1
Roman Catholic	149	1	5	77	66	0
Protestant	283	1	23	159	99	1
Methodist	70	0	1	43	26	0
Presbyterian	60	0	7	29	24	0
Baptist	41	1	2	26	11	1
Lutheran	26	0	1	15	10	0
Congregational	17	0	2	10	5	0
Other Protestant	69	0	10	36	23	0
Jewish	3	1	2	0	0	0
Nondenominational	88	2	26	47	13	0
Teachers colleges	13	1	1	7	4	0
PRIVATE 4-YEAR INSTITUTIONS	625	11	72	327	212	3
Percentages	100.0	1.8	11.5	52.5	33.9	0.5
2-Year institutions	103	0	0	2	88	13
ALL PRIVATE INSTITUTIONS	728	11	72	329	300	16
Percentages	100.0	1.5	9.8	45.2	41.2	2.2
ALL 4-YEAR INSTITUTIONS	945	13	102	503	324	3
Percentages	100.0	1.4	10.8	53.2	34.3	0.3
ALL 2-YEAR INSTITUTIONS	291	0	0	4	229	57
Percentages	100.0	0.0	0.0	1.4	79.0	19.6
ALL ACCREDITED INSTITUTIONS	1,235	13	102	507	553	60
Percentages	100.0	1.0	8.3	41.0	44.8	4.9

posed of doctors. Almost one-fifth of them have no doctors at all. Among the 4-year institutions, however, one-eighth have more than half the faculty composed of doctors and less than one per cent have no doctors at all.

It may be noted that almost three-quarters of the privately controlled institutions are 4-year liberal arts colleges. Marked differences are found between the 4 main groups of these institutions. The best showing is made by the small Jewish group, each of which has more

TABLE IV

DISTRIBUTION OF NONREGIONALLY ACCREDITED INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES ACCORDING TO GROUPS OF FACULTY MEMBERS HOLDING EARNED DOCTOR'S DEGREES, BY CONTROL AND TYPE OF INSTITUTION, 1954–55.

Groups	Institutions	A 75–100%	B 50–74%	C 25–49%	D 1–24%	E None
PUBLIC INSTITUTIONS						
Technical schools	2	0	0	0	2	0
Other professional schools	6	0	0	0	4	2
Liberal arts colleges	6	0	0	3	2	1
Teachers colleges	5	0	0	0	4	1
PUBLIC 4-YEAR INSTITUTIONS	19	0	0	3	12	4
Percentages	100.0	0.0	0.0	15.8	63.2	21.0
2-Year institutions	116	0	0	4	50	62
State accredited	109	0	0	4	48	57
No accreditation	7	0	0	0	2	5
ALL PUBLIC INSTITUTIONS	135	0	0	7	62	66
Percentages	100.0	0.0	0.0	5.2	45.9	48.4
PRIVATE INSTITUTIONS						
Technical schools	7	0	0	1	5	1
Theological schools	109	4	27	35	32	11
Theological seminaries	71	4	27	32	6	2
Bible institutes	38	0	0	3	26	9
Other professional schools	69	0	4	10	41	14
Medical	29	0	2	3	24	0
Art and music	17	0	0	0	7	10
Other	23	0	2	7	10	4
Liberal arts	106	0	2	29	72	3
Roman Catholic	36	0	1	12	23	0
Protestant	45	0	1	11	30	3
Methodist	12	0	1	4	7	0
Baptist	13	0	0	3	8	2
Other Protestant	20	0	0	4	15	1
Nondenominational	25	0	0	6	19	0
Teachers colleges	5	0	0	1	4	0
PRIVATE 4-YEAR INSTITUTIONS	296	4	33	76	154	29
Percentages	100.0	1.4	11.1	25.7	52.0	9.8
2-Year institutions	135	0	0	9	74	52
State accredited	116	0	0	9	65	42
No accreditation	19	0	0	0	9	10
ALL PRIVATE INSTITUTIONS	431	4	33	85	228	81
Percentages	100.0	0.9	7.7	19.7	52.9	18.8
ALL 4-YEAR INSTITUTIONS	315	4	33	79	166	33
Percentages	100.0	1.2	10.5	25.1	52.7	10.5
ALL 2-YEAR INSTITUTIONS	251	0	0	13	124	114
Percentages	100.0	0.0	0.0	5.2	49.4	45.4
ALL NONACCREDITED INSTITUTIONS	566	4	33	92	290	147
Percentages	100.0	0.7	5.8	16.3	51.2	26.0
ALL INSTITUTIONS (Accredited institutions from Table III)	1,801	17	135	599	843	207
Percentages	100.0	0.9	7.5	33.3	46.8	11.5

than half of its faculty composed of doctors. Almost one-third of the nondenominational group achieve this standard, but it is reached by only 8 per cent of the Protestant institutions and one-half that proportion of those under Roman Catholic control. Evidently many of the

church-related colleges should give much greater attention to increasing the number of doctors on their faculties if they wish to reach standards of competence comparable with those obtaining at most of the universities.

Nonaccredited Institutions. Among the nonaccredited institutions (Table IV), only 37 have more than half their faculties composed of doctors and 31 of these are theological seminaries, which in many cases, on account of the specialized nature of their work, have not sought regional accreditation. On the other hand more than a quarter of the nonaccredited institutions have no doctors on their faculties.

III. ANALYSIS BY SIZE OF FACULTY

Distribution of Highest Earned Degrees

Table V shows, for all 1,801 institutions combined, the percentage of faculty members having the different highest earned degrees, arranged primarily by size of institution as measured by number of members of its faculty.

For all groups of publicly controlled institutions with less than 1,000 faculty members each, the percentage of doctors increases with each increase in size of faculty, the largest of these groups of institutions having more than 6 times the proportion of the smallest of them. Or judging by the average years of preparation above the baccalaureate, the difference ranges from slightly over one year in the smallest group to almost 2 years in the largest one.

The differences are not so marked nor so uniformly increasing for these same groups of privately controlled institutions, but the same general trend may be observed.

The differences between groups of corresponding size for the publicly and privately controlled institutions is very marked. For most of these groups the privately controlled institutions have distinctly greater proportions of doctors than the publicly controlled ones.

It is noteworthy that the groups of institutions with faculties from 500 to 999 each, are outstanding. This group is superior to either the larger or the smaller institutions, whether judged by percentage of doctors or by average years of preparation beyond the baccalaureate.

Institutions by Proportion of Doctorates

Table VI, arranged in the same way as Table V as far as size of in-

TABLE V

PERCENTAGE DISTRIBUTION OF HIGHEST EARNED DEGREES OF FACULTY MEMBERS IN ALL INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES, BY CONTROL AND SIZE OF FACULTY, 1954–55.

Number of members of faculty	Institutions	Faculty members	Percentage having					Average years of preparation above baccalaureate
			Doctor's	Master's	Bachelor's	Professional	None	
PUBLIC INSTITUTIONS								
1– 24	123	2,117	6.5	67.1	22.6	0.0	3.8	1.10
25– 49	165	5,880	12.4	63.5	18.7	0.5	4.9	1.22
50– 74	115	6,956	19.9	61.8	14.1	0.5	3.7	1.44
75– 99	58	5,003	22.9	56.3	13.6	0.4	6.8	1.42
100– 199	87	12,041	29.0	53.6	9.3	3.7	4.4	1.65
200– 299	36	8,689	31.1	45.9	10.8	2.6	9.6	1.53
300– 399	14	4,847	37.9	39.5	14.3	5.3	3.0	1.77
400– 499	16	7,383	40.4	35.3	15.0	3.7	5.6	1.72
500– 999	20	14,161	43.7	34.6	11.8	9.8	1.1	1.95
1000–1999	7	9,049	38.9	32.2	13.0	15.4	0.5	1.92
2000–2999	0	0	—	—	—	—	—	—
3000–3999	1	3,040	22.7	35.9	17.7	23.7	0.0	1.66
Totals	642	79,166	31.2	45.6	13.2	6.1	3.9	1.66
PRIVATE INSTITUTIONS								
1– 24	317	5,382	19.6	45.8	28.1	0.7	5.8	1.18
25– 49	443	15,924	23.1	49.9	19.4	2.8	4.8	1.40
50– 74	176	10,526	28.8	44.7	16.3	5.8	4.4	1.56
75– 99	76	6,442	32.0	43.0	18.5	2.6	3.9	1.58
100– 199	70	9,333	33.8	37.7	15.7	8.2	4.6	1.66
200– 299	29	7,278	32.1	37.0	15.9	12.6	2.4	1.71
300– 399	13	4,443	29.5	24.0	13.1	31.3	2.1	1.83
400– 499	8	3,556	25.9	32.1	13.6	23.4	5.0	1.64
500– 999	17	12,828	37.0	16.1	8.6	16.3	2.0	2.24
1000–1999	8	10,044	49.6	14.7	8.3	23.1	4.3	2.11
2000–2999	1	2,900	18.3	72.1	8.6	0.0	1.0	1.55
3000–3999	1	3,829	63.5	19.5	11.7	0.0	5.3	2.12
Totals	1,159	92,485	35.5	35.3	15.0	10.4	3.8	1.73
GRAND TOTALS	1,801	171,651	33.5	40.1	14.1	8.4	3.6	1.70

stitutions is concerned, classifies the institutions in the same A, B, C, D, and E classes already explained in connection with Tables III and IV.

Most of the institutions which have no doctors on their faculties (Class E) are found in the institutions with less than 50 faculty members. These institutions include a large proportion of the 2-year institutions of the country.

The number of institutions having half or more of their faculties composed of doctors (Classes A and B) is noticeably large among the smaller private institutions, while very few are found among the smaller public institutions. The number of Class A institutions is widely scattered among institutions of different size.

TABLE VI

DISTRIBUTION OF ALL INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES ACCORDING TO GROUPS OF FACULTY MEMBERS HOLDING EARNED DOCTOR'S DEGREES, BY CONTROL AND SIZE OF FACULTY, 1954–55.

Number of members of faculty	Institutions	A 75–100%	B 50–74%	C 25–49%	D 1–24%	E None
PUBLIC INSTITUTIONS						
1– 24	123	0	2	4	50	67
25– 49	165	0	1	21	109	34
50– 74	115	0	2	38	68	7
75– 99	58	0	1	27	28	2
100– 199	87	0	8	38	41	0
200– 299	36	1	2	21	12	0
300– 399	14	0	2	10	2	0
400– 499	16	0	5	9	2	0
500– 999	20	1	5	13	1	0
1000–1999	7	0	2	4	1	0
2000–2999	0	—	—	—	—	—
3000–3999	1	0	0	0	1	0
Totals	642	2	30	185	315	110
Percentages	100.0	0.3	4.7	28.8	49.1	19.1
PRIVATE INSTITUTIONS						
1– 24	317	6	29	67	145	71
25– 49	443	2	17	162	239	22
50– 74	176	1	21	85	67	2
75– 99	76	0	9	41	25	1
100– 199	70	0	16	28	25	1
200– 299	29	1	3	14	11	0
300– 399	13	1	1	6	5	0
400– 499	8	0	0	4	4	0
500– 999	17	2	7	6	2	0
1000–1999	8	2	1	1	4	0
2000–2999	1	0	0	0	1	0
3000–3999	1	0	1	0	0	0
Totals	1,159	15	105	414	528	97
Percentages	100.0	1.3	9.1	35.7	45.5	8.4
GRAND TOTALS	1,801	17	135	599	843	207
Percentages	100.0	1.0	7.5	33.2	46.8	11.5

IV. ANALYSIS BY GEOGRAPHICAL LOCATION

Distribution of Highest Earned Degrees

Table VII is arranged on the general pattern of Tables I, II, and V, but with classification of publicly and privately controlled institutions according to geographical location rather than type or size. The geographical classification, shown in detail in footnotes to Table VII, follows the organization of the 6 regional accrediting associations.[14]

[14] This arrangement makes possible certain comparisons with the North Central Association study summarized above. It should be noted, however, that that study covers accredited institutions only, while Table VII includes both accredited and nonaccredited institutions.

Because of the marked differences already found between 2-year and 4-year institutions, they are shown separately as well as in combined form for each regional area.

Institutions in the Western area (chiefly California) have the high-

TABLE VII

PERCENTAGE DISTRIBUTION OF HIGHEST EARNED DEGREES OF FACULTY MEMBERS IN ALL INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES, BY CONTROL, GEOGRAPHICAL LOCATION, AND HIGHEST LEVEL OF INSTRUCTION, 1954–55.

Geographical location and type	Institutions	Faculty members	Percentage having					Average years of preparation
			Doctor's	Master's	Bachelor's	Professional	None	
PUBLIC INSTITUTIONS								
New England[1]	30	3,324	30.5	47.8	17.0	2.4	2.3	1.61
4-Year institutions	28	3,269	30.2	48.1	17.0	2.4	2.3	1.60
2-Year institutions	2	55	49.1	40.0	7.3	0.0	3.6	2.00
Middle States[2]	92	11,263	36.3	42.1	16.9	1.2	3.5	1.67
4-Year institutions	53	9,661	40.9	41.4	15.1	1.4	1.2	1.82
2-Year institutions	39	1,602	8.4	46.9	27.4	0.0	17.3	0.74
Southern[3]	169	22,119	29.6	46.5	11.5	10.3	2.1	1.72
4-Year institutions	99	19,393	32.8	43.8	10.7	11.8	0.9	1.82
2-Year institutions	70	2,726	6.3	65.7	17.3	0.0	10.7	1.00
North Central[4]	234	29,666	33.0	47.4	10.7	6.9	2.0	1.77
4-Year institutions	123	26,215	36.7	44.5	9.6	7.8	1.4	1.87
2-Year institutions	111	3,451	5.2	69.2	18.7	0.0	6.9	1.06
Northwest[5]	45	4,828	33.2	38.6	15.4	5.1	7.7	1.56
4-Year institutions	22	3,769	40.6	39.5	11.2	6.5	2.2	1.88
2-Year institutions	23	1,059	7.1	35.0	30.4	0.0	27.5	0.43
Western[6]	72	7,966	20.6	45.2	19.5	0.0	14.7	1.10
4-Year institutions	14	2,469	46.3	37.6	11.8	0.0	4.3	1.87
2-Year institutions	58	5,497	9.1	48.6	22.9	0.0	19.4	0.76
PRIVATE INSTITUTIONS								
New England[1]	123	10,917	35.3	31.8	17.2	9.2	6.5	1.62
4-Year institutions	92	9,647	38.7	30.5	14.9	10.4	5.5	1.74
2-Year institutions	31	1,270	9.5	41.6	34.6	0.0	14.3	0.72
Middle States[2]	258	32,711	38.8	33.1	13.4	11.2	3.5	1.82
4-Year institutions	216	31,683	39.7	32.7	12.8	11.6	3.2	1.85
2-Year institutions	42	1,028	13.4	45.0	30.4	0.0	11.2	0.92
Southern[3]	293	14,783	27.1	42.7	15.3	11.7	3.2	1.61
4-Year institutions	167	12,580	30.7	40.9	13.0	13.8	1.6	1.75
2-Year institutions	96	2,203	6.6	52.8	28.4	0.0	12.2	0.82
North Central[4]	387	26,726	33.8	37.6	16.2	8.7	3.7	1.68
4-Year institutions	323	24,929	35.5	36.6	15.4	9.3	3.2	1.73
2-Year institutions	64	1,797	9.2	52.7	28.0	0.0	10.1	0.91
Northwest[5]	38	2,096	24.7	43.4	20.8	7.2	3.9	1.45
4-Year institutions	35	1,974	25.7	44.1	19.8	7.6	2.8	1.51
2-Year institutions	3	122	9.1	31.9	36.9	0.0	22.1	0.50
Western[6]	60	5,252	51.2	21.1	10.3	14.0	3.4	2.08
4-Year institutions	58	5,204	51.5	20.9	10.0	14.2	3.4	2.09
2-Year institutions	2	48	14.6	45.8	33.3	0.0	6.3	1.02

[1] Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
[2] Canal Zone, Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Puerto Rico
[3] Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, Virginia
[4] Arizona, Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, New Mexico, North Dakota, Ohio, Oklahoma, South Dakota, West Virginia, Wisconsin, Wyoming
[5] Alaska, Idaho, Montana, Nevada, Oregon, Utah, Washington
[6] California, Guam Hawaii

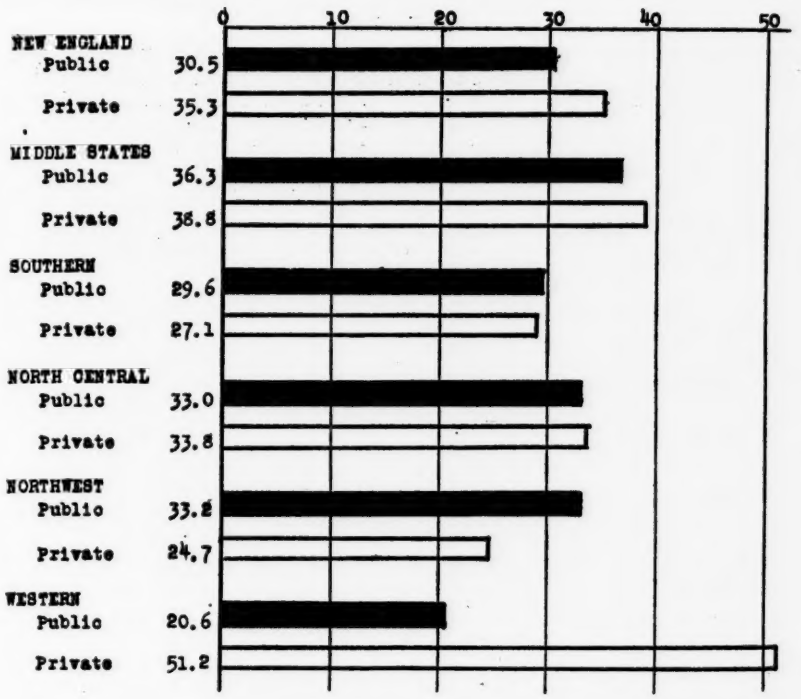

FIG. V. PERCENTAGE OF DOCTORS AMONG PUBLIC AND PRIVATE INSTITUTIONS IN THE SIX REGIONAL AREAS, 1954-55

est proportion of doctors of any of the regions in terms of privately controlled institutions, but the lowest in terms of publicly controlled ones. This marked difference is accounted for chiefly by the large number of publicly controlled junior colleges in California. The presence of 2-year institutions of different types and in varying numbers in the 6 regional areas complicates regional comparisons.

Figure V shows regional comparisons for percentages of doctorates for both publicly and privately controlled institutions in each of the 6 regions. Among publicly controlled institutions, the Middle States area stands distinctly highest; among privately controlled ones, the Western area.

Similar comparisons may be made in terms of average years of preparation beyond the baccalaureate, varying from slightly over 1 year in the publicly controlled institutions of the Western area to slightly over 2 years in the privately controlled ones of the same area.

TABLE VIII

DISTRIBUTION OF ALL INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES ACCORDING TO GROUPS OF FACULTY MEMBERS HOLDING EARNED DOCTOR'S DEGREES, BY CONTROL, GEOGRAPHICAL LOCATION, AND HIGHEST LEVEL OF INSTRUCTION, 1954–55.

Geographical location and type	Institutions	A 75–100%	B 50–74%	C 25–49%	D 1–24%	E None
PUBLIC INSTITUTIONS						
New England	30	0	1	8	18	3
4-Year institutions	28	0	1	7	18	2
2-Year institutions	2	0	0	1	0	1
Middle States	92	2	5	33	43	9
4-Year institutions	53	2	5	31	15	0
2-Year institutions	39	0	0	2	28	9
Southern	169	0	9	47	85	28
4-Year institutions	99	0	9	45	44	1
2-Year institutions	70	0	0	2	41	27
North Central	234	0	8	76	94	56
4-Year institutions	123	0	8	76	39	0
2-Year institutions	111	0	0	0	55	56
Northwest	45	0	3	13	24	5
4-Year institutions	22	0	3	13	6	0
2-Year institutions	23	0	0	0	18	5
Western	72	0	4	8	51	9
4-Year institutions	14	0	4	7	2	1
2-Year institutions	58	0	0	1	49	8
PRIVATE INSTITUTIONS						
New England	123	3	16	35	60	9
4-Year institutions	92	3	16	31	40	2
2-Year institutions	31	0	0	4	20	7
Middle States	258	4	27	109	104	14
4-Year institutions	216	4	27	106	74	5
2-Year institutions	42	0	0	0	30	9
Southern	393	2	22	80	153	36
4-Year institutions	197	2	22	78	90	5
2-Year institutions	96	0	0	2	63	31
North Central	387	3	28	158	163	35
4-Year institutions	323	3	28	156	119	17
2-Year institutions	64	0	0	2	44	18
Northwest	38	0	2	11	25	0
4-Year institutions	35	0	2	11	22	0
2-Year institutions	3	0	0	0	3	0
Western	60	3	10	21	23	3
4-Year institutions	58	3	10	21	21	3
2-Year institutions	2	0	0	0	2	0

Institutions by Proportion of Doctorates

Table VIII is arranged on the same general plan as Tables III, IV, and VI, but, as in Table VII, with primary classification by geographical location.

The number of Class A (75-100 per cent) publicly controlled institutions is very small, only 2, both in the Middle States area. This area also has 4 of the 15 privately controlled institutions, giving it more than one-third of the Class A institutions in the country.

TABLE IX

PERCENTAGE DISTRIBUTION OF HIGHEST EARNED DEGREES OF FACULTY MEMBERS IN INSTITUTIONS WHICH ARE MEMBERS OF THE ASSOCIATION OF AMERICAN UNIVERSITIES, 1954–55.

Control	Institutions	Faculty members	Percentage having					Average years of preparation
			Doctor's	Master's	Bachelor's	Professional	None	
Public	10	10,629	39.2	28.7	11.1	20.1	0.9	1.97
Private	16	17,213	56.4	25.0	7.8	4.7	4.1	2.10
TOTALS	26	27,842	49.8	26.4	10.3	10.6	2.9	2.05

Among the 152 institutions having more than half of their faculties composed of doctors (Classes A and B), the North Central area leads with 39 institutions, followed closely by the Middle States with 38, and by the Southern with 33.

V. ANALYSIS OF SPECIAL GROUPS

Members of Association of American Universities

The Association of American Universities, organized in 1900, consists of 35 leading American and 2 Canadian universities. Presumably higher standards of faculty preparation may be expected in these institutions than in all institutions of higher education or even in those enjoying regional accreditation. Unfortunately data were not available for all of the American members of this organization, but they could be secured for 26 institutions involving more than 27,000 faculty members.

Tables IX and X, constructed on the same pattern as Tables I and III, summarize the data on faculty distribution and institutional distribution for these institutions.

Almost half of the faculty members in these 26 institutions have the doctorate (Table IX) compared with only one-third of those in all institutions in the country (Table II). Their average preparation

TABLE X

DISTRIBUTION OF INSTITUTIONS WHICH ARE MEMBERS OF THE ASSOCIATION OF AMERICAN UNIVERSITIES, ACCORDING TO GROUPS OF FACULTY MEMBERS HOLDING EARNED DOCTOR'S DEGREES, 1954–55.

Control	Institutions	A 75–100%	B 50–74%	C 25–49%	D 1–24%	E None
Public	10	0	4	5	1	0
Private	16	4	8	3	1	0
TOTALS	26	4	12	8	2	0
Percentages	100.0	15.4	46.1	30.8	4.7	0.0

TABLE XI

PERCENTAGE DISTRIBUTION OF HIGHEST EARNED DEGREES OF FACULTY MEMBERS IN INSTITUTIONS FOR THE HIGHER EDUCATION OF WOMEN IN THE UNITED STATES, BY CONTROL AND TYPE OF INSTITUTION, 1954–55.

Group	Institutions	Faculty members	Percentage having					Average years of preparation
			Doctor's	Master's	Bachelor's	Professional	None	
PUBLIC INSTITUTIONS								
Liberal arts colleges	8	804	31.5	57.0	7.9	2.7	0.9	1.79
Teachers colleges	3	208	33.0	57.3	8.2	0.5	1.0	1.79
ALL PUBLIC INSTITUTIONS	11	1,010	31.8	57.0	8.0	2.3	0.9	1.79
PRIVATE INSTITUTIONS								
Professional schools	2	327	8.3	8.3	7.9	75.5	0.0	1.88
Liberal arts colleges	160	8,431	33.7	46.9	14.0	4.0	1.4	1.73
Roman Catholic	104	4,775	25.7	53.7	16.4	3.7	0.5	1.59
Protestant	25	1,125	36.9	48.3	11.1	2.9	0.8	1.83
Nondenominational	31	2,531	47.2	33.6	10.9	4.9	3.4	1.95
Teachers colleges	9	308	21.8	53.3	16.2	8.4	0.3	1.56
2-Year institutions	66	2,109	9.6	48.9	26.8	0.0	14.7	0.83
Roman Catholic	20	361	10.3	64.5	24.4	0.0	0.8	1.20
Protestant	14	419	8.8	54.2	25.5	0.0	11.5	0.91
Nondenominational	32	1,329	9.6	43.0	27.8	0.0	19.6	0.69
ALL PRIVATE INSTITUTIONS	237	11,175	28.0	46.4	16.3	5.4	3.9	1.56
TOTALS	248	12,185	28.4	47.2	15.6	5.2	3.6	1.58

beyond the baccalaureate is more than 2 years, compared with less than one and three-quarter years for those in all institutions.

In the privately controlled universities more than 56 per cent have the doctorate compared with only 39 per cent in the publicly controlled institutions. This difference may be accounted for, in part, by the much larger proportion with professional degrees in the publicly controlled institutions. Even if the doctor's and professional degrees be added together, however, the privately controlled institutions still show superiority.

Institutions for the Higher Education of Women

Tables XI and XII are arranged on the same plan as Tables IX and X, but for 248 institutions for the higher education of women for which data were available covering more than 12,000 faculty members.

The faculties of these institutions for women on the whole are not as well prepared as those of all institutions in the country (Table II). Somewhat more than a quarter of their faculty members have doctorates compared with more than a third with this degree in all institutions.

In contrast with previous comparisons, the relatively small number of publicly controlled institutions for women have faculties better

prepared than the much larger group of privately controlled institutions. But the large groups of private liberal arts colleges, both nondenominational and Protestant, stand out markedly above the other groups reported.

Institutions for the Higher Education of Negroes

Tables XIII and XIV are arranged on the same plan as Tables XI and XII, but for 101 institutions attended primarily by Negro students, for which data are available covering almost 6,000 faculty members.

The faculties of these institutions on the whole are not as well prepared as those of all institutions in the country. Their average preparation above the baccalaureate level, however, is only one-fifth of a year less than that for all institutions. This difference is much less than might have been anticipated in view of the belief on the part of many people that the staffs of institutions for the higher education of Negroes are quite inadequately prepared for collegiate work.

The same superiority of privately controlled institutions that has been noted already several times is also evident in the case of these Negro institutions. In the privately controlled institutions, one-fifth of the faculty members have doctorates compared with less than one-

TABLE XII

DISTRIBUTION OF INSTITUTIONS FOR THE HIGHER EDUCATION OF WOMEN IN THE UNITED STATES ACCORDING TO GROUPS OF FACULTY MEMBERS HOLDING EARNED DOCTOR'S DEGREES, 1954–55.

Group	Institutions	A 75–100%	B 50–74%	C 25–49%	D 1–24%	E None
PUBLIC INSTITUTIONS						
Liberal arts colleges	8	0	0	6	2	0
Teachers colleges	3	0	0	3	0	0
ALL PUBLIC INSTITUTIONS	11	0	0	9	2	0
Percentages	100.0	0.0	0.0	81.8	18.2	0.0
PRIVATE INSTITUTIONS						
Professional schools	2	0	0	0	2	0
Liberal arts colleges	160	1	15	84	60	0
Roman Catholic	104	0	2	53	49	0
Protestant	25	0	4	14	7	0
Nondenominational	31	1	10	16	4	0
Teachers colleges	9	0	0	5	4	0
2-Year institutions	66	0	0	2	52	12
Roman Catholic	20	0	0	1	15	4
Protestant	14	0	0	0	12	2
Nondenominational	32	0	0	1	25	6
ALL PRIVATE INSTITUTIONS	237	1	16	90	118	12
Percentages	100.0	0.4	6.8	37.9	49.8	5.1
TOTALS	248	1	16	99	120	12
Percentages	100.0	0.4	6.5	39.9	48.4	4.8

TABLE XIII

PERCENTAGE DISTRIBUTION OF HIGHEST EARNED DEGREES OF FACULTY MEMBERS IN HIGHER EDUCATIONAL INSTITUTIONS IN THE UNITED STATES ATTENDED EXCLUSIVELY OR PREDOMINANTLY BY NEGROES, BY CONTROL AND TYPE OF INSTITUTION, 1954–55.

Group	Institutions	Faculty members	Percentage having					Average years of preparation
			Doctor's	Master's	Bachelor's	Professional	None	
PUBLIC INSTITUTIONS	38	3,028	16.4	67.9	12.4	1.8	1.5	1.46
4-Year institutions	32	2,818	17.4	68.1	11.5	1.9	1.1	1.50
2-Year institutions	6	210	3.3	65.3	25.2	0.0	6.2	0.95
PRIVATE INSTITUTIONS	63	2,709	20.0	52.7	16.0	9.9	1.4	1.52
4-Year institutions	50	2,470	21.6	54.0	13.1	10.8	0.5	1.62
2-Year institutions	13	239	2.9	39.7	46.9	0.0	10.5	0.54
TOTALS	101	5,737	18.1	60.8	14.1	5.6	1.4	1.49
4-Year institutions	82	5,288	19.4	61.5	12.2	6.1	0.8	1.56
2-Year institutions	19	449	3.1	51.7	36.7	0.0	8.5	0.73

sixth of those in institutions that are publicly controlled.

In only 1 of the 101 institutions for the higher education of Negroes did even half of the faculty have the earned doctorate in 1954-55. At 85 of these institutions the proportion with doctorates was under one-fourth and in 15 of them there were no doctors on the teaching staffs.

VI. COMPARISONS OF 1939 AND 1955

Introductory

The analysis of highest earned degrees up to this point has dealt entirely with conditions existing in the academic year 1954-55. It is

TABLE XIV

DISTRIBUTION OF HIGHER EDUCATIONAL INSTITUTIONS IN THE UNITED STATES ATTENDED EXCLUSIVELY OR PREDOMINANTLY BY NEGROES, ACCORDING TO GROUPS OF FACULTY MEMBERS HOLDING EARNED DOCTOR'S DEGREES, 1954–55.

Group	Institutions	A 75–100%	B 50–74%	C 25–49%	D 1–24%	E None
PUBLIC INSTITUTIONS	38	0	0	4	32	2
4-Year institutions	32	0	0	4	27	1
2-Year institutions	6	0	0	0	5	1
PRIVATE INSTITUTIONS	63	0	1	11	38	13
4-Year institutions	50	0	1	11	34	4
2-Year institutions	13	0	0	0	4	9
TOTALS	101	0	1	15	70	15
Percentages	100.0	0.0	1.0	14.9	69.2	14.9
4-Year institutions	82	0	1	15	61	5
2-Year institutions	19	0	0	0	9	10

important, however, to know not only where we are, but where we have come from, and at what rate we have travelled. Such information should give some basis for judging where we may be going in the next few years, particularly by 1970, as referred to in the opening paragraph of this study. We need to know something of trends as well as status.

The best sources for comparable data appear to be the earlier editions of *American Universities and Colleges* and *American Junior Colleges,* both published in 1940. Both of these volumes present data for the academic year 1938-39, before the World War, and both were compiled and published under the same auspices. 1940 was the date of the first edition of *American Junior Colleges,* hence no earlier year could be used. The 1940 edition of *American Universities and Colleges,* the fourth edition of this well known reference work, contained data on 723 regionally accredited institutions. In each of these 1940 volumes faculty data were usually reported for doctors, masters, and bachelors only, although a few institutions also gave number of professional degrees.

It was possible to find 645 regionally accredited, 4-year institutions for which comparable faculty data were given in the 1940 and 1956 volumes of *American Universities and Colleges,* and 99 regionally accredited, 2-year institutions in the two corresponding volumes of *American Junior Colleges.* It should be noted that no California junior colleges were included in these comparative data. This was because in 1940 the Western College Association had not begun to act as a regional accrediting agency and California junior colleges, therefore, were limited to state accreditation.

The present section consists of an analysis of available faculty data for these 744 regionally accredited institutions for the academic years 1938-39 and 1954-55, referred to hereafter more briefly as 1939 and 1955.

Distribution of Doctors, Masters, and Bachelors

Table XV summarizes the results of this comparative study for the years 1939 and 1955. The classification plan is that of Table I. "Faculty members" here means the total of those holding the doctor's, master's, and bachelor's degrees only.

This table shows a distinct increase in the proportion of doctors in the 16-year period in all publicly controlled institutions and an in-

TABLE XV

COMPARISON OF DISTRIBUTION OF DOCTOR'S, MASTER'S, AND BACHELOR'S DEGREES OF FACULTY MEMBERS IN REGIONALLY ACCREDITED INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES, BY CONTROL AND TYPE OF INSTITUTION, IN 1939 AND 1955.

Group	Institutions	Faculty members		Percent holding					
				Doctor's		Master's		Bachelor's	
		1939	1955	1939	1955	1939	1955	1939	1955
PUBLIC INSTITUTIONS									
Universities	70	17,173	30,073	38.9	45.4	41.0	41.4	20.1	13.2
Technical schools	9	839	1,556	15.6	19.5	36.6	42.6	47.8	37.9
Liberal arts colleges	43	3,767	6,484	29.9	39.6	55.8	52.0	14.3	8.4
Teachers colleges	113	6,370	9,502	22.3	31.7	68.6	63.5	9.1	4.8
PUBLIC 4-YEAR INSTITUTIONS	235	28,149	47,615	33.2	41.0	49.1	47.3	17.7	11.7
2-Year institutions	52	1,364	1,976	7.5	7.8	67.0	74.2	25.5	18.0
ALL PUBLIC INSTITUTIONS	287	29,513	49,591	32.1	39.7	49.9	48.4	18.0	11.9
PRIVATE INSTITUTIONS									
Universities	45	16,685	26,151	58.3	57.1	22.4	31.5	19.3	11.4
Technical schools	12	1,590	2,976	33.9	45.2	31.0	32.0	35.1	22.8
Other professional schools	2	665	810	54.9	86.3	6.5	5.7	38.6	8.0
Liberal arts colleges	349	15,693	22,197	36.1	37.9	42.0	47.9	21.9	14.2
Roman Catholic	86	3,717	5,443	27.9	27.4	48.3	53.4	23.8	19.2
Protestant	200	7,606	11,423	34.3	37.1	44.0	50.2	21.7	12.7
Methodist	51	2,004	3,216	32.8	36.3	45.6	51.4	21.6	12.3
Presbyterian	42	1,547	2,157	34.4	36.1	43.6	50.9	22.0	13.0
Baptist	33	1,256	2,029	33.8	40.5	47.3	48.7	18.9	10.8
Lutheran	18	676	1,177	31.4	28.7	42.9	54.0	25.7	17.3
Congregational	14	572	705	33.0	42.8	43.9	45.7	23.1	11.5
Other Protestant	42	1,551	2,139	38.0	38.8	40.2	48.6	21.8	12.6
Nondenominational	63	4,370	5,331	46.3	50.6	33.1	37.2	20.6	12.2
Teachers colleges	2	146	117	40.4	50.4	49.3	43.6	10.3	6.0
PRIVATE 4-YEAR INSTITUTIONS	410	34,779	52,251	47.0	48.7	31.4	38.1	21.6	13.2
2-Year institutions	47	1,326	1,661	11.0	11.4	54.6	59.8	34.4	28.8
ALL PRIVATE INSTITUTIONS	457	36,105	53,912	45.7	47.6	32.3	38.8	22.0	13.6
ALL 4-YEAR INSTITUTIONS	645	62,928	99,866	40.9	45.0	39.3	42.5	19.8	12.5
ALL 2-YEAR INSTITUTIONS	99	2,690	3,637	9.2	9.4	60.9	67.7	29.9	22.4
ALL ACCREDITED INSTITUTIONS	744	65,618	103,503	39.6	43.8	40.2	43.4	20.2	12.8
Association of American Universities, Members of	22	12,096	19,579	57.9	59.4	20.7	29.5	21.4	11.1

crease, though a much smaller one, in all privately controlled institutions. In 1939 the difference in favor of the institutions under private control was much more marked than in 1955. They are still ahead, as shown in numerous earlier tables, but the publicly controlled institutions have been rapidly closing the gap between the two groups. If this trend continues a few years longer, institutions under public control will surpass those under private control in this measure of faculty competence.

The most important fact, however, is that in the period from 1939 to 1955 all accredited institutions have increased their proportion of

doctors markedly. The data in the next to the last line of Table XVI for "All Accredited Institutions" is shown graphically in Figure VI.

In the same period the proportion of faculty members with the bachelor's degree only has dropped to two-thirds the proportion that was found in 1939.

The percentage of doctors increased in all component groups shown in Table XV except in the private universities and in the Roman Catholic and Lutheran liberal arts colleges. There were small decreases in these three groups.

None of the above comparisons apply to non-regionally accredited

TABLE XVI

PERCENTAGE OF INCREASE OF TOTAL FACULTY AND OF HOLDERS OF DOCTOR'S DEGREES IN REGIONALLY ACCREDITED INSTITUTIONS OF HIGHER EDUCATION IN THE UNITED STATES, BY CONTROL AND TYPE OF INSTITUTION, IN 1939 AND 1955.

Group	TOTAL (Doctor's, Master's, Bachelor's)				Doctor's only			
	1939	1955	Increase 1955	Percentage increase	1939	1955	Increase 1955	Percentage increase
PUBLIC INSTITUTIONS								
Universities	17,173	30,073	12,900	75%	6,682	13,652	6,970	104%
Technical schools	839	1,556	717	85	131	304	173	132
Liberal arts colleges	3,767	6,484	2,717	72	1,126	2,564	1,438	128
Teachers colleges	6,370	9,502	3,132	49	1,420	3,011	1,591	112
PUBLIC 4-YEAR INSTITUTIONS	28,149	47,615	19,466	69	9,359	19,531	10,172	109
2-Year institutions	1,364	1,976	612	45	102	153	51	50
ALL PUBLIC INSTITUTIONS	29,513	49,591	20,078	68	9,461	19,684	10,223	108
PRIVATE INSTITUTIONS								
Universities	16,685	26,151	9,466	57	9,721	14,927	5,206	54
Teachers colleges	1,590	2,976	1,386	87	539	1,346	807	150
Other professional schools	665	810	145	22	365	699	334	92
Liberal arts colleges	15,693	22,197	6,504	41	5,670	8,422	2,752	49
Roman Catholic	3,717	5,443	1,726	46	1,038	1,490	452	44
Protestant	7,606	11,423	3,817	50	2,607	4,236	1,629	62
Methodist	2,004	3,216	1,212	60	658	1,167	509	77
Presbyterian	1,547	2,157	610	39	533	778	245	46
Baptist	1,256	2,029	773	62	425	821	396	93
Lutheran	676	1,177	501	74	212	338	126	59
Congregational	572	705	133	23	189	302	113	60
Other Protestant	1,551	2,139	588	38	590	830	240	41
Nondenominational	4,370	5,331	961	22	2,025	2,696	671	33
Teachers colleges	146	117	−29	−20	59	59	0	0
PRIVATE 4-YEAR INSTITUTIONS	34,779	52,251	17,472	50	16,354	25,453	9,099	56
2-Year institutions	1,326	1,661	335	25	146	190	44	30
ALL PRIVATE INSTITUTIONS	36,105	53,912	17,807	49	16,500	25,643	9,143	55
ALL 4-YEAR INSTITUTIONS	62,928	99,866	36,938	59	25,713	44,984	19,271	75
ALL 2-YEAR INSTITUTIONS	2,690	3,637	947	35	248	343	95	38
ALL ACCREDITED INSTITUTIONS	65,618	103,503	37,885	58	25,961	45,327	19,366	75
Association of American Universities	12,096	19,579	7,483	62	7,004	11,631	4,627	66

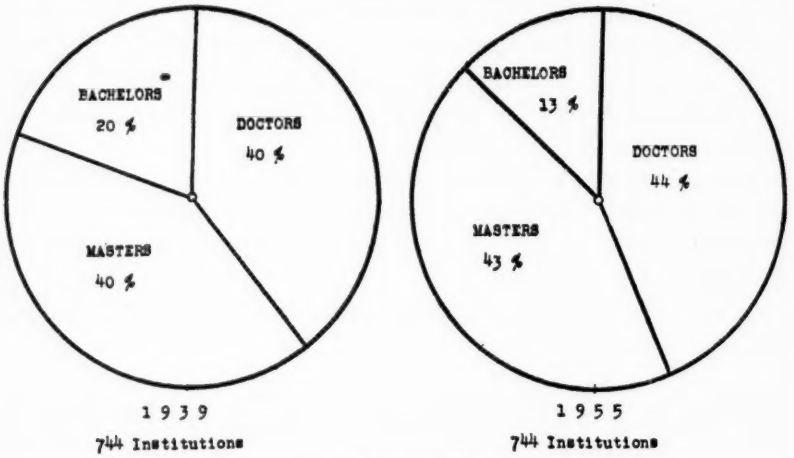

FIG. VI. DISTRIBUTION OF EARNED DEGREES IN ACCREDITED 4-YEAR INSTITUTIONS, 1939 AND 1955

institutions. How their situation has changed in the same period can only be conjectured.

Percentages of Increase, 1939 to 1955

Table XVI, showing percentages of increase from 1939 to 1955, has been derived from Table XV. For the same 744 accredited institutions, it exhibits the actual and percentage increases for two important groups—total faculty (doctors, masters, bachelors); and doctors only.

While the total number of faculty members increased 58 per cent in the 16-year period, the number of doctors on these faculties increased 75 per cent.

It is thus clear that in the past 16 years the increase in proportion of doctors on faculties of higher educational institutions has more than kept pace with the necessary rapid increase in total faculty members in the same period. Is this commendable trend about to be reversed in the next 16 years, as conditionally prophesied on the first page of this study? The plans of the newly organized National Woodrow Wilson Fellowship Corporation supported by a $25 million grant from the Ford Foundation in April 1957 to encourage several thousand able young people to become college teachers is one promising indication that the trend may not be reversed. Detailed plans for en-

couragement of college teachers at some leading graduate schools point in the same direction. In this connection a consideration of trends in these schools in the past 16 years is significant.

Increase in Doctorates Earned in Leading Graduate Schools

The same two volumes of *American Universities and Colleges* used in the foregoing analysis also contain lists of the total number of doctorates conferred by each of 133 graduate schools in the 10-year period 1930-1939[15] and by each of 199 graduate schools in the 8-year period 1948-1955.[16] Since the number of doctors available for increases in the faculties of higher educational institutions in the decades immediately ahead must come, for the most part, from these graduate schools, it is instructive to list the leading graduate institutions and show for each of them the average annual number of doctorates it has conferred in the two periods and the percentage of increase of this annual average.

This information is presented in Table XVII, in which the institutions have been arranged in three groups according to their average annual output of doctors in 1948-55. Thirty-six graduate schools in 1948-55 had an average production of doctors of 50 or more per year. The 13 that had an output of 50 to 99 per year have been termed *medium* sized graduate schools; the 13 with 100 to 199 per year, *large*; and the 10 with 200-499 per year, *very large*. Publicly controlled institutions are starred (*).

Summaries are shown for these three groups of institutions, and also for the smaller ones not shown individually in the table. Summaries are also shown for the 17 public institutions and the 19 private institutions comprising this group of 36 leading graduate schools.

An inspection of Table XVII shows that 28 of these 36 leading graduate institutions more than doubled their production of doctors in the period under consideration. In only one was there a decrease and that was slight. The greatest actual increase was made by Columbia University with 297, followed closely by the University of California with 270. No other institution increased as much as 200 doctors. Columbia and California are easily the leading institutions of the country in production of doctors. In 1955 the former conferred 547 doctoral degrees, the latter 468.

[15] Fourth edition, table facing p. 92.
[16] Seventh edition, pp. 67-68.

TABLE XVII

INCREASE IN AVERAGE ANNUAL NUMBER OF DOCTORATES CONFERRED BY 36 LEADING AMERICAN GRADUATE SCHOOLS, 1930–39 AND 1948–55.

Institution	Average doctorates conferred in 1930–39	Average doctorates conferred in 1948–55	Percentage of increase
Very Large			
Columbia University	195	492	152%
*University of California	99	369	273
*University of Wisconsin	131	317	142
Harvard University	131	313	139
University of Chicago	168	262	56
*University of Illinois	91	254	179
Cornell University	123	245	99
*Ohio State University	89	231	159
*University of Michigan	96	216	125
New York University	90	211	134
Large			
Yale University	116	186	60
*University of Minnesota	74	184	149
Stanford University	42	162	286
Massachusetts Institute of Technology	42	157	274
*State University of Iowa	83	151	82
*Purdue University	11	137	1,145
*Indiana University	83	127	53
Northwestern University	36	126	250
University of Pennsylvania	65	123	89
*University of Texas	26	115	342
*Pennsylvania State University	19	103	442
*Iowa State College	41	103	151
University of Southern California	21	101	381
Medium			
Princeton University	46	90	96
University of Pittsburgh	41	89	117
Catholic University of America	38	82	116
Johns Hopkins University	81	79	−2
*Michigan State University	8	78	875
*University of North Carolina	23	72	213
California Institute of Technology	28	70	150
*University of Missouri	16	64	300
Syracuse University	6	60	900
Boston University	10	59	490
*University of Washington	22	58	164
Duke University	22	55	150
*University of Maryland	13	52	300
Summaries			
17 Public	925	2,631	184
19 Private	1,301	2,962	128
36 Public and Private	2,226	5,593	151
10 Very Large	1,213	2,910	140
13 Large	659	1,775	169
13 Medium	354	908	156
Small (1930–39, 97; 1948–55, 163)	285	1,513	431
TOTALS	2,511	7,106	183

* Publicly controlled institutions.

The greatest percentage gains were made by Purdue University, Syracuse University, and Michigan State University. Their phenomenal percentage increases result from the very small bases from which they were computed, the three institutions having annual averages of only 11, 6, and 8 doctorates in the earlier period.

The 17 publicly controlled institutions have made much more rapid growth in production of doctorates than the 19 under private control. The privately controlled institutions produced 58 per cent of the doctorates in these 36 leading institutions in the earlier period. This percentage dropped to 53 in the later period. It may be noted that of the two leading institutions, one is privately controlled, one publicly controlled.

No significant differences in percentages of increase are found among the three groups of institutions when they are classified by size, but there has been a marked increase in number of smaller graduate schools and in their production of doctorates. Only a summary for these institutions is shown in Table XVII. Their number has increased more than two-thirds and their production of doctors more than five-fold.

When all institutions conferring the doctorate in the two periods are compared, it is seen that the average annual number of doctors increased from 2,511 to 7,106. This increase still continues. The total number in 1955, the last year covered by *American Universities and Colleges,* was 8,840. In 1956 it was 8,903.[17]

Doctorates for Women. A surprising fact, not shown in Table XVII, is that the average number of women who secured the doctorate in 1948-55 was 685 or 9.6 per cent of the total number; while in the earlier period it was 504 or 14.7 per cent of the total. Thus while there has been an increase in the actual number of women securing the doctorate, this increase has not nearly kept up proportionately with the increase in men securing this degree. In 1956, more than one-third of those earning bachelor's degrees were women; more than one-third of those earning master's degrees were women; but less than one-tenth of those earning doctor's degrees were women.[18] These proportions were essentially the same in 1955 and 1954.

Thus during the past three years, at least, women have been responsible for more than one-third of the baccalaureate and first graduate degrees, but for less than one-tenth of the more advanced doctorates. This highest earned degree increasingly has come to be regarded as almost a *sine qua non* for a satisfactory permanent university appointment. With the anticipated shortage of qualified faculty members, already referred to, should there not be a concerted and

[17] "Earned Degrees Conferred, 1955-56," *Higher Education,* 13: 128, March 1957 (With corrections).

[18] *idem.*

systematic effort to interest more young women in continuing their formal education for the doctorate after they have demonstrated a certain degree of competence in graduate work by securing the master's degree?

The situation is not even as favorable as it was a quarter of a century earlier. In 1930 no less than 16 per cent of the doctorates were earned by women as compared with less than 10 per cent today. May a reversal of this trend not be hoped for during the next decade with a much larger number as well as much larger proportion, perhaps as high as one-third, of the doctorates conferred on women? Such women would then be qualified for the college faculties of the future as well as for research positions in government and industry for which the doctorate is often essential. They would thus be prepared to help materially to meet the impending shortages in these fields which threaten to become acute in the near future.

Conclusion. In the past 16 years there has been a notable increase of faculty members in the same 645 institutions from more than 65,000 to more than 103,000 individuals, and in the same period an even more rapid increase in number of doctors on these faculties from over 25,000 to over 45,000. Whether this increase both in number and proportion of doctors on the faculties of institutions of higher education will continue during the coming decade or decade and a half, or whether it will be cut in half as predicted in the opening paragraphs of this study, cannot now be determined. The object of this study has not been to venture into the uncertain realm of prophecy, but to exhibit much more extensively than has been done before present conditions in various groups of institutions and to show the amount and direction of change during the past two decades. Such information should serve as a firmer basis for intelligent action on the part of those concerned with the "expansion of graduate schools" and by other educational leaders who may be responsible for various plans for more adequately staffing the higher educational institutions of the United States during the next two challenging decades.

A Dean Looks Back

FREDERIC PALMER

HAVERFORD COLLEGE was founded in 1833 by a group of Orthodox Quakers who felt a "concern" for the proper and select education of their children. Their ideals were high and their discipline was strict, just as it would have been in their own homes of that period. The president of the college and the members of the Board of Managers have all been Quakers from that day to this, except that during the past two decades the Alumni Association and the college faculty have been invited to elect, respectively, three and two representatives who meet with the Board as nonvoting members. The fact that membership on the Board is limited to Quakers makes Haverford technically a Quaker college irrespective of the religious affiliations of the students or of the faculty.

When the Carnegie Foundation for the Advancement of Teaching, some forty years ago, established a pension system for retired professors of nonsectarian colleges only, Haverford was faced with a dilemma. It would be handicapped in attracting the best teachers to its faculty unless it could offer them a retiring pension. It badly needed help from the Carnegie Foundation, help that was denied because Haverford was a sectarian college. But was this its true status, since less than a third of both student body and faculty were Quakers? And also since the strict customs and discipline of the past had been broadened and modified to approximate those obtaining in nonsectarian institutions?

As members of the faculty whose very existence after retirement was at stake we were all agog when our most distinguished colleague and leading Quaker in America went to New York to interview the Directors of the Carnegie Foundation and persuade them that Haverford was not really a sectarian college at all! His assignment was a difficult though, to us, a somewhat amusing one. His mission failed. The Foundation stuck to its definition of a sectarian institution as one governed by a Board all of whose members were required to belong to one religious sect.

Although this was a blow, the Managers were equal to the emergency and responded nobly. They voted to raise and set aside enough

capital to provide pensions for retiring professors in amount equal to that which was provided by the Carnegie Foundation to those at nonsectarian colleges.

As time went on the Foundation found itself unable to provide pensions, on a noncontributory basis, to an ever increasing number of eligible candidates. Hence the system was changed to a contributory one in which both the professor and the college participate as is customary today. This system was made applicable to sectarian and nonsectarian colleges alike. Both systems are now in force at Haverford since the old strictly Haverford system applies to those of the faculty who were appointed before the new Carnegie system went into operation. Only a few of us are left!

II

My acquaintance with Haverford College began in April, 1904, when I walked with interest and admiration across the beautiful campus to keep an appointment with the president, Isaac Sharpless. He wanted to know whether I was well suited to be appointed Instructor in Physics, and I wanted to know whether Haverford was a good place for me to begin my life work.

After a brief preliminary skirmish President Sharpless, with quick mind, penetrating eye, and keen sense of humor, came to the point. "I don't need to ask you much about your qualifications in Physics. You come here with the recommendation of the Physics Department at Harvard and that is enough for me."

"I expect to receive my master's degree in June," I replied. (I hope modestly.)

He continued (apparently unimpressed), "But if you should come here next September as Instructor in Physics, I should want you also to teach Astronomy."

"Astronomy!" I burst out. "I have never studied astronomy at all. I don't know anything about astronomy. Why I don't know any more about astronomy than—than—than *you* do!"

A glint in the eye with facial muscles unchanged told me that he was inwardly amused and that I had probably pulled a boner.

"Well," I stammered, "of course I don't know how much you know about astronomy, but I know nothing."

After I had taught physics *and astronomy* at Haverford for three years I was browsing in the Library one day and came across an ex-

cellent little book entitled *Popular Astronomy,* by Isaac Sharpless! No wonder he had a glint in the eye; but I shall never know how he managed to keep a straight face.

My interview with President Sharpless did not terminate, as it well might have done, immediately after my boner. He elicited from me that I had been counselor in a boy's camp for three years and had taught in two preparatory schools for a total of three years. Thus he laid the groundwork for bringing up the third function he wished me to perform.

"With your experience," he averred, watching my reaction with a sharp eye, "you might be interested in improving your financial position by helping with the discipline in both dormitory and dining room. I could then add free board and lodging to your salary of $1200 as Instructor in Physics."

"Yes," said I, "I should like to consider that possibility. Perhaps, as it is nearly lunch time, you would be good enough to take me to the dining room so that I can eat with the college and see what it is like."

This cautious reply was undoubtedly the result of my having been caught with one boner already and not wishing to be caught with another by getting into something I could not handle.

"Certainly. That's a good idea," said Isaac Sharpless. "Let's walk over to the dining room at once."

We stood on the lawn while students gathered on the porch waiting for the door to open. To me it was an interesting and intriguing sight. Not so to President Sharpless, for I became conscious of the fact that he was getting fidgety. All at once along came a student I had taught in preparatory school. We greeted each other warmly. As I turned again to speak to the president, he quickly looked at his watch and said, "Oh, it just occurs to me that I promised Mrs. Sharpless I would bring you home to lunch with her and it is time we were going now."

That was a fast one and I knew it; but what could I do but follow along without being discourteous to the president's wife? He well knew what the atmosphere in that dining room was like and that he would not expose me to it at this critical juncture if he could help it.

I did not accept the appointment at once, but went home to discuss it with the family and the Harvard Physics Department. They all advised me to accept. Indeed they bolstered my morale to such an

extent that I took on the entire program—physics, astronomy, dining room, and dormitory! There were times during the first year when I was painfully conscious of wishing that I had snubbed Mrs. Sharpless's hospitality when I had the chance!

III

That first year was a memorable one. I received only one attempted baptism with water thrown down the stair well from the dormitory second floor. Carrying out my motto—"Always be on the alert"—I opened the door and entered, but paused for a second and glanced up before climbing the stairs. In that second the water splashed at my feet and my upward glance revealed the culprit as he dashed out of sight. However, our eyes had met for an instant, so I knew he had seen the failure of his prank and that he had been caught in the act. The fact that he knew that I knew and would be uncertain of the consequences for some time to come was, I thought, punishment enough. I have never mentioned the episode to him nor he to me.

Some time later I returned to my room in the dormitory early one evening after attending some social function in Philadelphia. This had kept me away from my usual seat at dinner in the college dining room, something that did not happen often. In those days (1905) the costume worn by a gentleman to an afternoon tea consisted of a frock coat, gray trousers, and a high silk hat. These I was wearing that evening as I approached the door of my room. The door refused to open. It was barricaded on the inside! I entered the student's room next to mine and found three youths seated somewhat expectantly and uneasily.

"Will one of you please crawl out that window onto the roof and into my window and open my door for me? It seems to be barred."

They looked from one to the other. No answer.

"Well then, I shall have to do it myself."

Depositing my silk hat on the bed, I carried out my own instructions and crawled through the windows; but opening the door was another matter. They had had plenty of time and had made a thorough job of the barricade. In due time the door was opened again and I went at once to retrieve my hat. The students had vanished; and so, alas! had my hat. I ran them down in a room at the end of the hall where they with some others were awaiting developments.

"The hat which I left on the bed in your room is gone. I want it

returned immediately. When it comes to stealing my hat you have carried this thing too far. I want the hat back at once and with the surface undamaged."

I retired to my room and began to put things in order. In ten minutes there was a knock at my door.

"Here is your hat, sir."

"Thank you."

That night I retired feeling thankful that my demands for the hat had been respected and complied with to the letter, even though the barricaded door still left me with an unsolved disciplinary problem.

That was the year I learned "mostest" fastest, which includes many matters not connected with the teaching of physics and astronomy. But I had survived. There was the satisfaction, too, of feeling that student behavior both in the dining room and in the dormitory had somewhat improved. I came to the conclusion that our esteemed college president was paying me $1200 for my disciplinary work and giving me only free board for teaching physics and free room for teaching astronomy!

IV

The teaching of astronomy presented a daily challenge. I had to keep at least one jump ahead of a very alert class and sometimes failed in doing so. But there were compensations. Since I had charge of the observatory I had to learn how to use the 8-inch equatorial telescope. That was fun. I explored the heavens and became acquainted with some of the wonders that lie hidden there—Saturn with its rings, and the Great Nebula in Orion. This nebula I thought the most beautiful, awe-inspiring, thought-provoking sight of all. I wanted to share my new-found pleasure in the stars with my friends and hence invited four or five of them at a time to join me at the observatory when the nights were unclouded.

One night when the seeing was especially good I pointed the telescope at the Great Nebula and turned to the Quaker lass sitting beside me on top of the observation ladder.

"There! Look at that!"

She looked and looked. Her jaw dropped. As she turned away she said, "What do you suppose it is for?"

"Wh-what did you say?" I blurted out.

"What do you suppose it is for? Everything is for something you know!"

I was speechless. That anyone could believe God had created the universe and each item in it just for the pleasure or use of Man was more than my scientific training could stand. What is the Great Nebula in Orion for! What would you have told her?

V

How to teach physics was my biggest problem. I loved the subject and tried to inject some of my enthusiasm into the fourteen indifferent students that made up my first class in General Physics. During a few years preceding my arrival physics at Haverford had passed through various vicissitudes which, in the minds of the students, made it the least desirable course in the whole curriculum. This attitude had to be changed. I had carte blanche to teach in any way that I chose; but there was nobody to turn to for advice. I was Instructor in Physics, but not in a Department of Physics. I *was* the Department!

Difficult as this situation was, it had certain advantages. One was that I received all mail that came to the college addressed "Head of the Department of Physics." Such an envelope came to me in the spring of 1905. It contained the announcement that Professor Ernest Rutherford, of McGill University, would deliver the recently endowed Silliman Lectures at Yale on the subject "Radioactivity," and it extended a cordial invitation to attend on three successive afternoons.

The opportunity fascinated me. Many of the new, strange properties of radioactive substances had been discovered by Rutherford and I had recently been discussing them with my advanced class of three students. Here was a chance to see the great physicist and perhaps to hear him describe his most recent as yet unannounced discoveries. I did not dare ask leave to cut my classes for all three days but felt that I might be justified in asking for the last two days. With some trepidation I took the announcement, the invitation, and my request to be absent and presented them to President Sharpless. He turned to me with a grave face, but with the same sparkle in the eye that I now knew so well, and said, "I cannot give you permission to go. Nor can anybody else. You are Instructor in Physics. If you think you can afford to leave your classes for two days, by all means go, and good luck to you!" I went.

My New Haven train was late. As I dashed into the University building I found the lecture-room door already closed, but a booming

voice echoed from within. Gingerly I opened the door. The room was absolutely dark! A quick glance in the light that came through the door revealed a room of medium size with every seat taken. There was not even standing room. No! There was one seat piled up with overcoats in the middle of the front row. I closed the door quickly and made for that seat in absolute blackness. When seated at last I picked up the thread of Rutherford's remarks. He was about to show for the first time in history the condensation of radium emanation at the temperature of liquid air. Previously it was not known whether or not this emanation was a true gas. Its behavior in this experiment indicated that it probably is. We now know it as the radioactive gas radon.

Rutherford passed the emanation through a glass tube where it ultimately encountered some crystals that then glowed very faintly; but when he plunged this part of the tube into liquid air the crystals began to glow brilliantly as the emanation condensed upon them. To appreciate such a change in luminosity our eyes had to be adapted to the dark, hence for about ten minutes the room had been made entirely dark.

The lecture ended at four-thirty and immediately a crowd of about twenty-five questioners, of whom I was one, surrounded Rutherford on the platform. After a wait of some minutes I persuaded myself to resume my seat and wait until the others were through. Why not? I had nothing else to do for the rest of the day. As Rutherford finished his discussion with the last person on the platform I stepped up.

"Professor Rutherford, I should like to ask about so-and-so."

"Yes; I should like to discuss that with you, but ———" he pulled out his watch, "but it is tea-time. Why don't you come over to the Faculty Club and have tea with me?"

I could hardly believe my ears! We sipped tea and talked for an hour. Then I rose to go.

"Sit still. It is almost dinner time. I want you to have dinner with me!" This was overwhelming. Three hours ago I should not have believed it possible. We spent the evening together. When ten o'clock came I deemed it prudent to withdraw though my inclination was to remain far into the night.

As we parted Rutherford said, "Now, they are going to show me through their new laborat'ry of physics tomorrow morning at eleven o'clock. How would you like to join me there, see the laborat'ry and

come back here for lunch?" I was there promptly at eleven. As Rutherford's protégé, I received more attention from Yale than I have from that time to this. We examined all the rooms with their up-to-date facilities. We lunched together and talked until it was time to go to the last lecture. After the lecture we bade each other a very warm farewell, and I settled down in my seat on the train for home with my head in a whirl such that it spins again whenever I think of this experience of a lifetime. Can you realize what it meant to an obscure young physics teacher in a small Quaker college to suddenly become so closely associated for twenty-four hours with one of the greatest living physicists and one of the most powerful scientific minds the world has ever produced?

Rutherford was soon called to the University of Manchester, England, and from there he succeeded J. J. Thomson at the Cavendish Laboratory, Cambridge, England, and became the greatest physicist in the world. I am happy to say that on each of his subsequent visits to the United States I was able to hear him speak and greet him afterwards. He had no difficulty in remembering me and we laughed over some of the events that took place in those memorable hours at Yale.

Soon after Rutherford had gone to Cambridge I wrote asking if he would accept one of my best physics majors, who was about to graduate from Haverford College, to do graduate work at the Cavendish Laboratory. He replied that he was sorry to refuse, since he had made it a rule to accept nobody who had not received a Ph.D. degree. Shortly thereafter the student went to Cambridge, called upon Rutherford, and repeated his request for admission. Rutherford made an exception to his rule and accepted him. The connection proved to be an eminently successful and happy one. That student was Gaylord P. Harnwell, formerly Head of the Physics Department and now President of the University of Pennsylvania.

VI

After four years of teaching physics I was appointed Dean of Haverford College, and after one more year Associate Professor of Physics. I was given a laboratory assistant who looked after the apparatus and helped set up experimental demonstrations.

I kept office hours, as Dean, from eight to ten every morning, not to mention frequent periods of overtime. I had to administer the "cut system," not only for classes, but also for "Collection" and "Meeting."

"Collection" meant a brief period of worship for the whole college in the auditorium when a chapter from the Bible was read followed by a silent prayer and often remarks by the president, the dean, or an invited speaker. I have never been certain whether the word "Collection" meant a gathering of the clan, as the students thought, or a time when a collect, or prayer, was said.

"Meeting" meant a regular Quaker meeting in the nearby meetinghouse for the students and the faculty and their wives. Students were, and still are, required to attend, but the others came when they felt like it. The time was eleven o'clock every Thursday morning, except one, each month. One Thursday was omitted because the time conflicted with the regular "Monthly Meeting" of the neighborhood Quakers.

Each student sat in an assigned seat facing a double row of Quaker members of the faculty and a scattering of wives across the aisle. The president and the dean were almost always present, the former seated with the elders facing the students, and the latter near the rear, a practice that tended to limit the number of students that read books or played chess.*

When the doors were closed a wonderful silence fell upon the assemblage and held it in its grip for perhaps twenty minutes. Solemnly one of the elders arose and was moved to speak his message. Or perhaps one of the wives dropped on her knees to pray, the signal for everyone to rise and stand with bowed head. It was a rare occasion when a student was moved to speak, though the opportunity for him to do so was always there.

There have been students from before my time to the present who have vigorously opposed being required to attend "Meeting" once a week for three-quarters of an hour. This requirement has been discussed back and forth between students, faculty, administrative officers, Board of Managers, and alumni. Admittedly there are two sides to the question; but the alumni, who have all been through the mill, in general feel that they have got something worth while from their experiences in "Meeting" and so are opposed to changing the requirement. This weighs heavily in the minds of the faculty as an argument for retaining the status quo. Not so with some of the students who

* The method of limitation was restrained, affable, effective—and memorable: "N., if you don't do your reading in Meeting a little less obviously, I shall have to speak to you about it."—Ed.

feel that their rights are infringed upon and have not thought the problem through far enough to reach the conclusion that if they don't want to be required to attend "Meeting" they can perfectly well go elsewhere to college!

One Thursday morning as I sat in my laboratory office a messenger burst in to say that President Sharpless wished to see me in his office *immediately*. Something of unusual importance must have come up. I dashed across the campus and up to the president's office. As I entered he arose from his chair and without a word closed the door behind me, then motioned me to be seated.

"When we are in Meeting this morning one of the students is going to get up and make a protest against required attendance. Thereby he expects to win a bet of seventeen dollars. Who is he?"

"Why, I haven't the faintest idea," I gasped.

"We must leave here for the Meetinghouse at 10:45. It is now 10:30. We have fifteen minutes to find out!"

President Sharpless handed me the bulletin containing the names of all the students, a piece of paper, and a pencil.

"Write down the names of the three students who, in your opinion, would be likely to do such a thing, Put the most likely first and the least likely last. I am going to do the same thing. Then we will compare our lists."

I was certainly on the spot, but I admired the president's resourcefulness, and the challenge was stimulating.

For five minutes the silence was unbroken as we pored over the names and each wrote down his list of three.

The president looked up and I handed him my selection. The suspense did not last long.

"We have picked the *same* three names! The number one man is the same on both lists. The only difference is that your second and third names are in the reverse order from mine. Now let's go to Meeting."

The first fifteen minutes passed in silence as usual. Then up rose our number one man.

"I want to———."

Instantly President Sharpless was on his feet. Pointing at the culprit he said in thunderous tones:

"D———! I think thee had better sit down!"

And down he went, wilting in his tracks like a punctured balloon.

I have never known how the news of such an impending episode reached the president. However, I suspect that a telephone call came from a loyal alumnus who perhaps had overheard his son or daughter talking about the coming event with a "date." If the alumnus were a Quaker who felt that such an occurrence would leave a blot on the Haverford Meeting, he might have wrestled with his conscience all night and finally put in his call at the last moment. When I was Acting President for one semester I learned that the alumni are not only a loyal but a very vocal group. They feel that they have the privilege of communicating a "concern" to the president at any time, and they certainly take advantage of the privilege. It is a healthy sign and contributes to sympathetic understanding, co-operative effort, and solidarity of purpose.

The reaction of some of the students was very different. They could not understand how the telltale information reached the president's ears unless it had come through the dean. They thought I must have found out about D———'s intention to speak in Meeting through the operation of an efficient spy system. Needless to say no spy system of any kind has even been in effect at Haverford College; but when an explanation must be found for a strange phenomenon we often lack imagination and are prone to settle for the simplest explanation, improbable though that may be. We are apt to revert to past experiences, which in this case meant life in a preparatory school where the tradition persisted that the masters used student spies.

Soon after this historic episode the college year came to an end and everybody went away to forget about it. Not so with our friend D———. He withdrew from Haverford (though not at our suggestion) and entered a large university in the Midwest.

As the college year got under way in the fall I received an anonymous letter bearing the postmark of a Midwest city. This letter berated me in strong language for the outrageous treatment I meted out to the students and especially for the vicious spy system through which I received incriminating information. The letter was typed on a rather poor typewriter. I was mystified. At first I thought to identify the typewriter and so reveal the owner in college.

Then came a similar letter; and then another; and finally three more at weekly intervals. The postmark on each letter was that of a different Midwest city. Only then was I convinced that all the letters had been written by D———, who probably entrusted each one to a different

college friend who was going to a nearby city to spend a week end at home and who promised to mail the letter there. To what lengths will man, especially the young of the species, go to vent his spleen and satisfy his vanity!

VII

Examinations at Haverford are conducted on the "honor system," which, on the whole, has worked rather well during the past sixty years. The basic unit is the class. All the juniors taking history meet in one room. All the sophomores taking history meet in another room, and so on. The theory is that a man is less likely to cheat when it will be known by his classmates than under other circumstances. The honor of the class is at stake. If any member of the class happens to observe some suspicious irregularity, he is in honor bound to report it to the Student Council, where it will be carefully looked into.

Whenever a student fails an examination that causes him to fail his semester's work, he is permitted to take a make-up examination at a later date. The date usually specified by the dean falls in the first week following the spring vacation in March. The theory is that during the ten-day vacation the student at least has an opportunity to review the work of the course undistracted by attendance at classes. Home distractions are out of our control.

Since the make-up examinations bring together a scattering of men from all four classes, the basic unit of the honor system, the class, is lacking. Hence the dean, with the aid of two graduate assistants as proctors, administered these examinations *not* under the honor system.

There is always a wide variety of examination papers, and the proper one has to be given to the right man. This requires careful sorting and preparation at the front of the auditorium while the candidates are coming in and taking their seats.

One cold March evening when there was still a little snow on the ground the two proctors and I were busily arranging the examination papers when five students came down the center aisle in lock-step with with a plunk, plunk, plunk of their feet as loud as they could make it. Trouble was brewing! I stepped forward and brought them to a halt.

"Now fellows! It isn't seven o'clock yet and we are trying to arrange these papers so that we can hand them to you without loss of

time. Won't you please go outside and wait five minutes? We shall be ready for you then."

They looked a little resentful, but they turned around and walked out in a perfectly respectful manner.

As I continued to work over the papers I glanced around every few moments to see what would happen next. Only that precaution saved the day! I turned my head just in time to see a shadowy form in the balcony at the rear throw a snowball that sailed across the auditorium directly toward my head! In an instant I put up both hands and caught the snowball in true baseball style! The culprit dodged down behind the balcony railing and crawled on hands and knees out the balcony door unidentified. But he had stayed long enough to *see me catch* the snowball and he was not sure whether I had recognized him or not. That was enough. The uncertainty of the situation was his just punishment.

I threw the snowball into a metal wastebasket, where it landed with a thud.

"What was that?" said one of the surprised proctors.

"A snowball!"

"A snowball! Where did that come from!"

"The balcony."

"But did—did you catch it?"

"Yes; I caught it!"

"My Glory! They can't get away with anything when you are around!"

If I had not caught it, that snowball would have hit me squarely on the head. I envied the thrower his superb aim. Only my motto, "Always be on the alert," saved me from a very embarrassing situation.

VIII

Speaking of the honor system at Haverford, the evidence that it worked on the whole satisfactorily was largely negative, that is, the number of suspicious cases brought before the student council was few. Positive evidence, namely, that students under our honor system left college with an abiding faith in honesty, came to us only rarely; but when it did come it gave us a feeling of satisfaction and renewed faith in the system.

One of our graduates who had recently received his Ph.D. from a large university in the East called at my office to talk things over. He

expressed his satisfaction in his choice of university and the work he had been given to do. He also was very appreciative of the training he had received at Haverford. It was excellent preparation for his graduate work.

"But," said he, "the atmosphere in an examination room is terrible. Most of the graduate students were never brought up under the honor system and they still have the prep school attitude of trying to beat the game by cheating whenever it is possible. This is what happened to me.

"I had just answered the third question when the fellow across the aisle attracted my attention and surreptitiously showed me his own answer. At once I recognized that his answer was right and mine was wrong. I nodded to him and went on writing, but changed not a word of my original answer. Later we met outside.

" 'You poor fool!' he burst out. 'Didn't you know your answer to the third question was wrong?'

" 'Certainly,' I said. 'I knew that as soon as I saw your answer. But I come from a college where they have the honor system; and I don't do that sort of thing!' "

How many times during the past forty years have I wondered whether under similar circumstances I should have had the courage to act as he did!

IX

Fifty years ago one aspect of college life at Haverford puzzled the faculty. Why is it that so often a student's work is very poor in sophomore year, very good in junior year, and excellent in senior year?

As a recently-installed dean I was skeptical of the facts, but felt that, if possible, I must come up with a solution to the puzzle. I wanted to know four things about it:

1. Was it real or only imaginary?
2. If real, was its occurrence rare or frequent?
3. How did it occur?
4. Why did it occur?

Statistics from the Registrar's Office provided data for finding the standing of each student at entrance and the end of each college year for each of five classes, namely, those that had been graduated from college for six to ten years. When these individual standings were averaged to give a class average, year by year, it was possible to follow

the progress of each class from entrance to graduation. Combination of the freshman averages for all five classes gave a per cent that represented, at least roughly, the achievement of the group of about four hundred students at the end of freshman year. Similar per cents for the group were obtained at entrance, and at the end of sophomore, junior, and senior years. A graph of the average per cents looked like Figure I, reproduced here from memory.

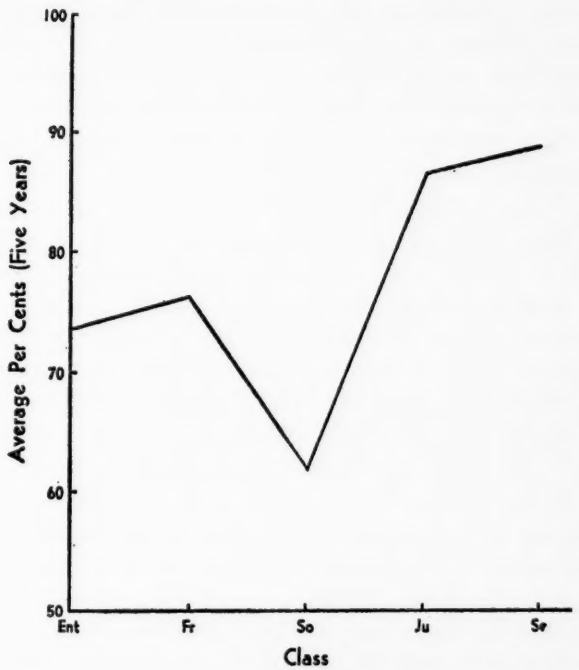

FIG. I. ACHIEVEMENT

The results show that (1) not only is the phenomenon real, but it is also of general application, since the graphs for each of the five classes separately were similar. (2) We must have admitted only those whose records on the entrance examinations were fairly good. They entered with a serious purpose that enabled them to improve their standing a little during freshman year. (3) When they became sophomores their serious purpose disappeared. They became playboys. Their puffed-up egos led them to believe their only college responsibilities

were to keep the freshmen subdued and in line. They felt that now they knew all the answers to the problems of college life. In particular, they knew how to let all scholastic work slide and then cram for exams enough to barely get by. Invariably certain ones didn't make it, so dropped out at this point. (4) But when the rest came back after the summer vacation and took up their work again, they found they were upperclassmen with definite responsibilities to keep the college going. They also found that some of those vaguely remembered sophomore subjects were pretty interesting after all. So they proceeded to dig into them with a will. This meant hard work, but once learned they cashed in on it the following year at an even higher level of achievement. (5) Thus this graph represents the progress in scholastic achievement of a group of five classes that graduated from Haverford College some forty years ago. I believe that the sampling yields valid results, and that other classes, up to the present, would be found to give similar achievement curves. Indeed, I think this graph represents progress of achievement in a great many other situations besides undergraduate college life.

Consider the case of the chief executive of a large business, or the president of a college or university. He has been appointed by a large group of enthusiastic followers with comparatively little opposition. Everybody is for him. His stock rises. As he gains confidence he introduces innovations that are unpopular. He steps on people's toes. His stock goes down, down, down. If he is great enough, he will survive the low point and go on to a successful career. But if he is not a big enough man for the job, he will drop out as he reaches the low point. At Harvard, President Eliot and President Lowell both passed through this cycle successfully. At Haverford, so did President Sharpless, though at one point he handed his resignation to the Board of Managers. Fortunately they refused to accept it and he became one of the most successful presidents the college ever had. I should like to call the graph of Figure I the presidents' curve, as well as the undergraduates' curve, of achievement.

How does this curve apply to the president of your institution? How far along it do you think he has gone? Is he slipping toward the bottom or rising toward the top? Indeed, what about your own position? You can probably locate yourself on that curve, too. At any rate you both can derive some satisfaction from looking at the high level shown by the last section of the curve, which promises that if you can

survive the sophomore low point, you should rise to a high level of achievement and go out in a blaze of glory!

X

If you like young men and have a sympathetic understanding of their problems, there is no more rewarding work than being a college dean. It provides the opportunity of coming close to some of the students and of becoming a powerful influence in their lives. The hardest to deal with are those who live inside a shell. They are suspicious of you as they are of everybody, only more so. If you can once succeed in cracking open that shell, they become your devoted followers.

But it does not do to remain behind the desk in the dean's office too long. I did. It gave me ulcers. The nervous tension is terrific. As you face the day's work each morning you never can tell what you will be called upon to do, what differences you will have to settle, or what battles you will have to fight.

When I retired from teaching a dozen years ago I took a position on the research staff of the Franklin Institute and am still driving to Philadelphia five days a week. My desk is in a room with a dozen research engineers who are exceedingly bright live wires. On the wall hangs a sign, "We don't get ulcers; we give them!" So the days when I got ulcers are over. Now I help to give them!

Whence Liberal Arts?

MAX S. MARSHALL

WHAT are popularly known as "liberal arts" have come in for vigorous discussions in recent years because these arts have been so crowded by science and professionalism, given material advantages by the exigencies of living and surviving. In a noteworthy degree the discussions have become defensive in an effort to preserve the liberal arts in our schools rather than discursive in an effort to appraise their place anew. The latter viewpoint is preferable, however, not only because analysis in cold blood is needed but for a more simple reason: to wit, because there is not the slightest chance that liberal arts will disappear. The question is one of true place and right balance, not one of struggle for a maximal level. As an observer who, with microbiology, sits on the ragged edge of liberal arts, easily ruled out but also almost as easily barred from scientific and professional fields, I propose to look over the fence on each side, with an equal interest in professionalism and in liberal arts.

In order to see clearly, a stipulated concept of liberal arts is essential. My field, microbiology, appears to most persons as a science, a material one at that, possibly a member of "arts and sciences" but hardly a member of the liberal arts. This does not faze me for nowadays everything is called "science," from some parts of history (political *science*) to frank sociology (social *science*). The term "science" has been sold to the *n*th degree, making so disreputable those who cannot in some way claim alliance with science that the man outside the fold feels like the famous Jim, justly proud of his status but claiming that everyone is out of step with him.

The position of a stipulated status for liberal arts can be seen by looking around its edges, for it is surrounded by two mobs. One group calls itself sciences, often improperly, and the other calls itself professions, meaning different aggregates of the standard basic elements put together to serve a material goal, such as medicine or law. Like science, the professions have numerous nefarious and improper claimants, groups which can less properly be called professions than the liberal arts themselves.

Pure liberal arts are outside the folds of these vociferous claimants. Their adherents are a bit puzzled by all the shouting, yet when their toes are stepped on, they join in the racket. Philosophy, physics, and

medicine can be cited with no argument as examples respectively of liberal arts, science, and profession. Should we cite mathematics as a liberal art, psychology as a science, and optometry as a profession, making claims with simple ease, an argument would surely be started. Without much debate pure liberal arts can include philosophy, music, art in the usual restricted (?) sense, languages, and history. For present purposes, let this be stipulated, allowing no debates as to whether something was left out or something does not belong. Hairsplitting will lead nowhere; the only point is that "liberal arts" means something, and that something is noteworthy, reputable, and of significance. What we do with them is another matter.

To settle a primary question, the function of liberal arts, is not possible but it can be discussed. In a world consecrated to material considerations, unless a function for liberal arts can be established no status can be maintained for long. To those within liberal arts any doubt that they have a function is virtually sacrilege, whereas outside the arts the question may arouse no more than: "Oh, sure, they have a function, I suppose, but . . ."

Among our more dedicated teachers the function of liberal arts is almost synonymous with the function of a college and university. This is often mentioned in a flowery language which, acceptable enough as to principle, is wholly inadequate in terms of making a case. No problem is ever solved by merely declaiming, by saying that liberal arts are all things to all men, that they are wonderful, that they have the grass roots of tradition behind them, or that man's soul will fly off into space without them. Supporting such expostulations are the cogent points, the facts themselves.

Mankind has picked up a philosophy of life from a few great philosophers and the evolution of thought through books and universities. Man of today, influenced by the classics which survive the test of time, assembles his philosophy through current interpreters and literature. As individuals, you and I start from nothing and develop our individual philosophies, drawing on the classics and on articulate interpretations aided by our talents for reception and creation and adding our own native wit. These are cold facts, seeming to warrant a place for philosophy as such. The same thing can be said for languages with even greater specificity, especially if we weave in the basic languages, Latin and Greek. To depict the solid functional place of history would be as easy. With art and music the evolution of

knowledge in a functional sense is possible only on disputatious grounds, but even those with little use for art and music will grant their importance in man's life.

The liberal arts have so vigorous a being in terms of function that our questions do not lie there. To debate whether or not the study of Latin has any functional value, with its infinite historic associations, with its strong position in our understanding both of our own language and of other languages, and with its structure which so well shows its students, who learned to talk their own language by a formless process of accretion, what it means to construct a language, would be useless and would never allow us to get on with our discussion. The boy or man who asks, "Why should I know Latin?" is in a class with the lady who asked Louis Armstrong what jazz is, producing his classic reply: "If you don't know what jazz is, ma'am, there is no use trying to tell you."

One realistic modern way to consider what can be done with the liberal arts, all of them functionally useful, is to consider in terms of taxpayers the extent to which they belong on our campuses. The true social cost of a given course is about the same in both private and state schools but these days we are accustomed to separate private and public schools sharply. Can we ask taxpayers to support good departments of history, philosophy, and music in a state school? The customary way of deciding the answer, simply asking whether or not such a move would be a good thing, is inadequate. The course in liberal arts has to be set against another course, say one in chemistry or public health, measuring it against an alternative rather than against an ideal.

This correctly depicts the liberal arts as a sort of luxury. Given a choice between an automobile and a year in college or between a television set and a work of art valued at $300, the decision in the minds of most men takes on a purely practical aspect. The comparisons are legitimate; a good case can be made for either decision. Such components of man's nature as cupidity, love of ease, disinclination to think, or preservation of an even status with the Jones family take over quickly. To argue that the course in college and the work of art are more fundamental, fruitful, and durable than the automobile and television seems to the chooser to be for the birds. The reprehensible attitude so common in the modern "So What!" era segregates liberal arts because man is and continues to be what he is. The taxpayer will

support fantastically what he likes to call "essentials," such as automobiles, liquor, television, cigarettes, cosmetics, and candy. Conversely, save for a few persons whose choices are unorthodox, luxuries include such items as music, drama, doctor's bills, and courses in Latin or philosophy. To many owners of television butter is called a luxury; to a few who love philosophy television may well be a luxury. The world is geared to popular demand rather than to propriety of choice or to the distinction between right and wrong. Like the politician, it argues that right and wrong have no basic meaning but are determined merely by popular opinion polls.

With a clear functional status, with high worth, but with relatively few takers the liberal arts demand a hard-boiled attitude. To ask whether or not Latin should be put in high schools and kept on college campuses is futile, but to ask how to put it in with a proper status is realistic. The political standing of the liberal arts deserves inquiry. For example, who can properly represent the proponents of languages, history, and philosophy? There can be no argument over the desirable positions of liberal arts because we know. We do not know how to meet the situation either by political or by correct standards. We cannot accept the judgments of those who teach the liberal arts because of their biases, their enthusiasms for their own work, and their defenses of their own positions; but their specific solid arguments apart from these distorted deviations are expert and acceptable. Our Medical Center is seeking and establishing courses in liberal arts because its special fields of medicine, dentistry, pharmacy, and nursing, are narrow. This is obvious acceptance of the reasoning in favor of liberal arts, not as sold by enthusiastic participants but as chosen from substantial intrinsic arguments. Politicians might argue that liberal arts should be geared to "modern demands"; but, if liberal arts stand for anything, to preserve their integrity while fitting them properly into the social scheme is imperative.

II

A cogent question and a disturbing one arises at this point as to whether or not the liberal arts, traditionally forming a backbone in our colleges and universities, really can be taught. Surely little Latin will be learned without a good teacher plus the pressure of a "course"; and surely the Mozarts and Jelly Roll Mortons, men who learned their art because of innate talents, are too rare to warrant leaving everything

to nature. An idea almost lost in modern discussions is needed, that the phase of liberal arts which can be taught is the truly basic phase, whereas the advanced stages which we usually think of when liberal arts are mentioned are induced rather than taught. My own Latin was meager and I learned things that could never have been taught, but fortunately Miss Marsh, an elderly drillmaster, was a devoted exponent of basic Latin. She taught what needed to be taught; the rest, up to me, was induced. Countless hours are spent on the "teaching" of literature under the label of English.[1] This lugubrious dissection of the thoughts in literature, frequently done to the violent distaste of the students and always with a personal bias, overlooks the fact that the literature of each field belongs to the field itself. It is an example of teaching too far, reaching beyond natural limits, and denying the responsibilities for basic teaching. The advanced steps should be left to induction or considered only with advanced students in liberal arts, the professionals.

A sturdy case can be made for the teaching of liberal arts both in high schools and beyond, if those responsible for the choices together with those responsible for the teaching will stick to basic training, leaving to induction the fruits of whatever further training can be induced. A high school course in music had us spending endless hours singing an oratorio by Handel or Mendelssohn, poisoning my mind forever and leaving me without the basic training that those hours could have afforded against later events, perhaps when, last year, I pursued two courses in jazz, for interest and pleasure. The basic training would have been combined with induced learning and natural interests as time and opportunity allowed. Certainly the oratorio did not help nor induce this learning unless by its obnoxious quality.

A major fraction of supporters' concern over liberal arts has been unnecessarily frenetic. That liberal arts should be dressed up in false finery and modern styles in order to "sell" them is degrading, an invalid idea. Not the schoolma'ams but intrinsic merit in Shakespeare has kept his name and words alive. If we give faith to those who have faith in Shakespeare, then we must say that only a few men and women of stature can present acceptable opinions about him, except for the give and take among experts. However, Shakespeare presented in his own rights will attract those who can and should be attracted.

[1] Max S. Marshall, "Hardly My Affair: Teaching English," *School and Society*, 73: 369-373, 1951.

Legitimately receptive persons do not consider basic approaches to music or philosophy drab. The attempt to add to the audience at the expense of those with legitimate interest is improper in the extreme. Concentration on the subject rather than on its presentation, on the basic elements rather than on those which will be induced by themselves, and on students with genuine interests rather than on the education of all in all ways should preserve a place for liberal arts in a real and constructive sense.

This thought can be diagramed with the aid of three of your neighbors, probably not even difficult to choose. Let the work and character of A be evidence that he is well suited to a trade, craft, or profession and that neither talent nor interest would take him far in liberal arts. Suppose B to be in a trade, craft, or profession but to be receptive and able in liberal arts. Consider C to be the neighbor who engages legitimately in the liberal arts, by profession, hobby, or freedom in choice of activity. With Neighbor A, the assumption that liberal arts would have had no place is not proper, especially since there was no sure way to know the future of A when he was in school. Any liberal arts successfully presented to A clearly should have been basic in every way. How much he picked up would be determined by limitations in talent, by the demands for training in his trade, craft, or profession, and by the extent of his training in schools. In a sense, his education in liberal arts could be measured by the availability of time. With Neighbor B, basic training in liberal arts to the limits of opportunity is well worth while. He will welcome it and be grateful for it, using it as groundwork for a lifetime of living and self-training in a hundred ways. Whether in terms of pleasure, in terms of better citizenship, or in terms of competence the contributions of liberal arts, however subtle, are for him great indeed.

Although Neighbor C offers an unlimited opportunity for education in the liberal arts, this in itself is an automatic curb. Beyond a certain threshold, teaching in liberal arts becomes either dubious or professional. I can learn a few elements of the theory of music, beginning perhaps in the realm of music or perhaps in physics; but if I am to understand composition I need a thorough training in techniques. These are professional components, in a curricular sense parts of liberal arts but ancillary rather than essential constituents. They become the essence of professional exchange of individual ideas and experiences, discursive rather than subjects taught. What I learn as a

nonmusician has to be basic and needs a teacher. This part belongs wherever schools and opportunities are possible, else in effect we deny that music has a place in society. Where I go from this fundamental start is my own business, however, so long as I do not get into professional training. It is neither the responsibility nor the privilege of a professional teacher; that is, I may seek professional aid, perhaps I am in a position to enjoy or study independently, or possibly I will pay no further attention.

The weighing of functions and realities of liberal arts is in fair accord with curricula, although the arts are greater than schools. That is, teachers of the liberal arts do attempt to present the basic elements to neophytes and to add courses for those who may attain the professional status. The situation is not sharply cleancut, however, as it should be. Often designed primarily as prerequisites for advanced courses, elementary courses may well miss those who need some knowledge of the groundwork at the expense of those who in a curricular sense go further professionally. Also, elementary courses for nonprofessionals are more often and far more reprehensibly of the survey type rather than basic, worshiping at the feet of the Great God of Smatter. Save for their televistic qualities these can be relatively harmless but I certainly object to putting tax monies into them. Let them be sold in bookstores, put on library shelves, and added to local lecture series; but they should never be allowed to parade as legitimate courses. I can read a popular survey of astronomy; but a course in basic elements of astronomy needs a good teacher, and only this belongs in schools. The process of living develops the surveys. The school is properly responsible only for training basic to any survey a citizen may later make.

A maximum amount of basic training in true liberal arts, excluding a number of current hybrids, can be fully justified. The liberal arts in significant degree are at the roots of nearly all fields of endeavor. Although high schools may in part become deliberate and legitimate trade schools, deviation from the liberal arts in the formative years should never be wide. In colleges, teachers of arts have two duties. As schools of advanced basic training, they prepare a few students for professional or semiprofessional work in the arts. For the many students, they must offer elementary groundwork. In both instances, however, only the broad platform from which all else is built is acceptable.

The natural consequence of a functional consideration is an im-

plication that in a university the liberal arts deserve a school of their own in a professional sense. In professional schools each group is inclined to present the liberal arts as related to the profession. A student in the School of Liberal Arts would hold the same relative position as a student in schools of agriculture or medicine. The School of Liberal Arts would depend on the basic training of its applicants just as do other schools, and accordingly it would want its preliminary training to be broadly conceived. A student who seeks medicine might be most benefited by a challenging course in philosophy, learning his medicine in the medical school. Thus, the Dean of the School of Liberal Arts might as reasonably say that a challenging course in biology would constitute the best preface for work in his school, rather than courses in liberal arts.

This, however, overlooks the solid and unique position of the liberal arts. Although the automobile may well be the end of man, it is not his goal. The university is or should be a repository of man's accumulated knowledge. His knowledge of science and professions is in encyclopedias and law books, but his cultural development is in the less definable realm of liberal arts. This distinction calls attention to a broader concept of the function of liberal arts. They are the links which integrate and tie together the components of the whole of our existence. We note a passing scene, perhaps no more than an advertisement for beer; but basic training and induced interests in liberal arts can cause a whole chain of reactions to be started. They may emerge in conversation, in a letter of the day, in a novel, or in a phase of government, but they broaden the scope of the integrated whole that composes life. The acoustical engineer who knows music is a greater man in every way, including professionally. The architect of worth is sure to have weighed many forms of art that cannot be built with stone and steel. The photographer who has not wondered what light is and how it works and how the aesthetics of composition come about, perhaps by studying the freedom of the artist with a brush, may be technically able but he is far from complete. The garage expert may have learned a few tricks in school, most of which his boss could have shown him in an hour and probably has to anyway; but he may better have spent his time in school on something that will give him creative drive, pleasant conversation, and broadened understanding and interests. These forces in life come in large measure from the liberal arts.

But this is making a case for that which needs no case, constructing a function for that which has a natural and evident function. "We should have more of this," is not the point and leads to an American type of frustration. Not more of everything good, but a balanced amount of ingredients which necessarily compose our lives is needed. Liberal arts have always belonged and they must always belong; they are irresistibly attractive. Since debates about liberal arts center about schoolrooms, the first task is to recognize their great place apart from education. Only then can the educational fraction be safely considered, and the answer becomes much clearer. Liberal arts under teachers, always basically presented, belong whenever and wherever there is appropriate opportunity, receptiveness, and need. In a cloistered section of the campus liberal arts have an unquestioned place alongside medicine, but so far as education is concerned this is advanced study for the specialist. Off the campus, advanced liberal arts are universal, at their best when built on good groundwork and tailored by each person according to talents, tastes, opportunities, and methods of study. Their universality, after all, furnishes the key to the *place* of liberal arts, just as freedom of thought demands that *education* in liberal arts be foundational.

Scholarships and the College-Going Behavior of Talented Students*

DONALD L. THISTLETHWAITE

THERE is considerable survey evidence which suggests that financial barriers prevent a large number of our youth from going to college. The percentage of high-ability who report they cannot go because of a lack of finances appears to vary with geographical region and with the level of ability considered. In 1947 Phearman (6) reported that among the top quartile of Iowa's high ability youth 32 per cent of those who did not go to college checked as their reason, "My parents could not afford to send me to college." Cole (3, p. 71) cited Steelman (7, pp. 26, 145) as reporting that the corresponding percentage in Ohio was 40 while the comparable figure in Indiana was 50 per cent. More recently the National Science Foundation supported a survey of college-going plans conducted by the College Entrance Examination Board. The survey (3) included 32,750 students from a nation-wide sample of high school students. Among students in the top 30 per cent of the ability continuum, 46 per cent of the boys and 50 per cent of the girls not planning to go to college mentioned as one of their reasons, "It would cost more than my family can afford." These figures agree roughly with Berdie's (2), derived from high-ability students in the top-scoring 19 per cent of Minnesota students on the American Council on Education Psychological Examination. Among the high-ability students planning to get jobs instead of going to college 58 per cent said they would attend college if they had more money. Goetsch and Barber previously reported somewhat smaller percentages of "financial drop-outs" among students in a more highly restricted range of talent (the top 15 per cent of the I. Q. distribution): about 42 per cent of Goetsch's Milwaukee students who reported they were not going to college full time approximately ten months after high school graduation said they would be interested in full-time schooling if a complete scholarship were available (5); 36 per cent of Barber's (1) Erie, Pennsylvania students who did not enter college were adjudged on the basis of interview responses as having as their most important reason a lack of finances.

* This study was partially supported by the National Science Foundation and the Old Dominion Foundation.

Survey studies vary somewhat, then, in the estimated percentage of students who are lost to higher education because of financial reasons. But, taken at face value, they all suggest that scholarship awards to talented high school seniors can markedly increase college attendance.

Data for evaluating this hypothesis, and a number of related hypotheses about the effects of scholarships, were collected in the execution of the National Merit Scholarship program. This paper is in the nature of a preliminary evaluation of the effects of scholarship assistance upon the first group of recipients. First, talented students' appraisals of the effects of scholarship assistance are analyzed. Secondly, changes in the major field of study during the freshman year in college are discussed since such changes may reflect some of the attendant effects of scholarships.

METHOD

The study is based upon a questionnaire completed by Merit Scholars at the end of their freshman year. The population studied consists of the winners of scholarship awards in the 1956 National Merit Scholarship program in which 58,000 high school seniors participated. The winners were selected primarily on the basis of competitive aptitude tests, and represent the top one or two per cent of the nation's high school graduates. Merit Scholars are enrolled at 160 different colleges and universities throughout the country. The awards to these students varied from $100 to $2,200 a year; the average stipend was $630. Approximately 34 per cent of the students required no financial help; to these the minimum award of $100 a year was granted.

STUDENT EVALUATIONS OF EFFECTS OF MERIT SCHOLARSHIPS

Two considerations should be kept in mind in interpreting the following results. First, it will be noted that these estimates are based on questionnaire responses. Some students who have been enabled to attend college by the scholarship may unduly minimize its importance or may actually not know what the consequences of not receiving assistance would have been. Secondly, one out of every three of these Scholars received the minimum award of $100; one would not expect such small stipends to affect materially the decision to enter college.

Perceived values of the award. When asked to describe the chief

TABLE I

RESPONSES TO, "IN YOUR OPINION WHAT HAVE BEEN THE CHIEF VALUES OF YOUR MERIT SCHOLARSHIP TO YOU?"

Content of Reply	N	Per Cent*
Relief from financial burdens	154	29
Increased sense of dedication	89	17
Prestige and honor	121	23
Freedom to attend preferred or better college	133	25
Increased self-confidence	72	13
Made college attendance possible	12	2
Made possible attending away-from-home college	7	1

* Based on responses of 536 Merit Scholars. One of the original 556 recipients declined his scholarship and six of those appointed have since resigned theirs. The present sample represents approximately 98 per cent of the first group of Scholars completing their freshman year. In this and some succeeding tables, percentages do not add to 100 because some respondents gave replies classifiable in more than one category.

values of the scholarship about three out of ten mention relief from financial burdens to themselves or their parents. Seventeen per cent of the scholars report an added sense of responsibility or dedication. Another quarter report that the prestige and honor of the award were major values. Similarly one-fourth of the Scholars regard the freedom to attend a better or preferred college of major importance. A sizeable proportion (13 per cent) mention increased self-confidence as an important by-product (Table I).

Effects on vocational goals. Each student was also asked to estimate the effect of the Merit Scholarship upon his vocational, educational, and life goals. About a third of the Scholars believe it had little or no effect. One out of seven believes that receiving a scholarship caused them to raise or at least change their vocational goals. A sizeable number (7 per cent) do not think they would have been as highly motivated in their studies had they not won Merit Scholarships. Three per cent say not getting aid would have delayed their college education; another two per cent report they probably would not have attended college otherwise (Table II).

Choice of College. More than half of the Scholars believe their scholarship enabled or encouraged them to go to a more desirable college; 44 per cent do not believe it had this effect (Table III). Apparently some students feel they were "encouraged" but not "enabled" to go to a more desirable college, for only 35 per cent report they probably would be attending a different institution if they had not received a Merit Scholarship. Only 2 per cent volunteered the in-

TABLE II

RESPONSES TO, "IF YOU HAD NOT WON A MERIT SCHOLARSHIP, IN WHAT WAY WOULD YOUR VOCATIONAL, EDUCATIONAL, OR LIFE GOALS HAVE BEEN AFFECTED?"

Content of Reply	N	Per Cent
No effect (little, probably none)	194	36
Raised or changed vocational goals	77	14
Goals would have been more difficult to attain	60	11
Would not have been as highly motivated	36	7
Would have attended poorer (nonpreferred) college	40	7
Would have had less balanced, more specialized curriculum	19	4
Would have delayed college education	15	3
Probably would not have attended college	12	2
Undecided	33	6

formation that they might not be attending college were it not for the award. The award apparently had a much greater effect upon college choice than upon the decision to enter or not enter college (Table IV).

Has the concentration of talented students at certain universities been increased by Merit Scholarships? A partial, but by no means definitive, answer can be obtained by comparing the actual distribution of 1956 Scholars at the 13 most popular institutions (i.e., most popular among the responding 536 Scholars) with the distribution of college choices *as it would have been if the award had not been made.* The latter can be estimated by replies to the question, "If you had not received a Merit Scholarship, what college would you probably be attending this year?" The results in Table V clearly suggest that concentration of highly talented students at the 13 selected colleges has been increased by Merit Scholarships. Forty-six per cent of the Scholars in this analysis are attending one of the "popular" institutions.

TABLE III

RESPONSES TO, "HAS THE MERIT SCHOLARSHIP ENABLED OR ENCOURAGED YOU TO GO TO WHAT YOU REGARD AS A MORE DESIRABLE COLLEGE?"

Content of Reply	N	Per Cent
Yes	282	53
No	235	44
No response	18	3
Don't know	1	—

TABLE IV

RESPONSES TO, "IF YOU HAD NOT RECEIVED A MERIT SCHOLARSHIP, WHAT COLLEGE WOULD YOU PROBABLY BE ATTENDING THIS YEAR?"

Content of Reply	N	Per Cent
Same institution	323	60
Different institution	188	35
None or perhaps none	12	2
Don't know	13	2

However, according to the students' reports, only 29 per cent would be going to one of these colleges if they had not received a Merit Scholarship. The difference between these two percentages could not have occurred by chance ($p < .001$). It appears that Merit Scholarships have increased the concentration of talented students at a relatively small number of institutions. This effect, if indeed it is an effect of the scholarship program, needs to be studied more sys-

TABLE V

COMPARISON OF COLLEGE CHOICE UNDER REAL AND IMAGINARY CONDITIONS

College	Per Cent Selecting the Given Institution*		Diff.
	Actual college choices of 536 Merit Scholars	Choices Scholars would have made if they had not received a scholarship	
California Institute of Technology	3.2 (17)	1.5 (8)	1.7
Chicago, University of	1.9 (10)	1.3 (7)	.6
Cornell University	3.5 (19)	3.9 (21)	−.4
Duke University	2.4 (13)	1.7 (9)	.7
Harvard College	10.1 (54)	6.3 (34)	3.8
Massachusetts Institute of Technology	6.7 (36)	2.6 (14)	4.1
University of Michigan	1.7 (9)	1.9 (10)	−.2
Princeton University	3.0 (16)	1.7 (9)	1.3
Radcliffe College	2.6 (14)	.7 (4)	1.9
Rice Institute	2.6 (14)	2.8 (15)	−.2
Stanford University	2.6 (14)	1.1 (6)	1.5
Swarthmore College	2.8 (15)	1.5 (8)	1.3
Yale University	3.0 (16)	1.9 (10)	1.1
Any of the 13 most "popular" colleges	46.1 (247)	28.9 (155)	17.2

* N's are listed in parentheses.

tematically and related to size of stipend and to the motivational attributes of Scholars.

CHANGES IN STUDY PLANS OF TALENTED STUDENTS

An important incidental result, which may or may not be an "effect" of scholarship assistance, concerns changes in major fields of study during the freshman year. About three out of every ten Scholars report they have shifted their probable major field of study since they started college. There appear to be rather clear-cut trends exhibited by Scholars to shift from science to nonscience and from applied to nonapplied fields. These trends, if confirmed on subsequent samples of talented youth, may be of considerable interest to persons concerned with the supply of scientific personnel.

Table VI shows that the percentage of Merit Scholars in science has decreased from 72 per cent at the beginning of college to only 65 per cent at the end of the freshman year. The difference of approximately 7 per cent is statistically significant at a high level of confidence: there is less than one chance in a thousand of such a difference occurring by chance. Very clearly Merit Scholars tend to shift away from science during the freshman year in college.

Another striking aspect of the changes in study plans is the tendency to move away from applied fields of study. About one out of every four of the "changers" are leaving applied fields of study, whereas only about 9 per cent are moving in the opposite direction. Table VII shows that the per cent majoring in applied fields of study dropped from 39 to 34.5 per cent. This decrease is statistically significant: we would expect such a difference to occur less than one

TABLE VI

SCIENCE AND NONSCIENCE STUDY PREFERENCES AMONG MERIT SCHOLARS AT BEGINNING AND END OF FRESHMAN YEAR

Major Field of Study	Preference at			
	Beginning of College		End of Freshman Year	
	N	Per Cent	N	Per Cent
Science	387	72.2	350	65.3
Nonscience	135	25.2	155	28.9
Undecided	14	2.6	31	5.8
Totals	536	100.0	536	100.0

TABLE VII

APPLIED AND NONAPPLIED STUDY PREFERENCES AMONG MERIT SCHOLARS AT BEGINNING AND END OF FRESHMAN YEAR IN COLLEGE

Major Field of Study	Preference at Beginning of College		Preference at End of Freshman Year	
	N	Per Cent	N	Per Cent
Applied field	209	39.0	185	34.5
Academic or "pure" science field	316	58.9	322	60.1
Undecided*	11	2.1	29	5.4
Totals	536	100.0	536	100.0

* Numbers of "undecided" respondents in Tables VI and VII do not agree since the two classifications are independent. For example, a student may have decided to major in some scientific field, although he remains undecided whether to enter an applied or nonapplied field

time in a thousand in sampling a population in which no change had occurred. It is apparent that Merit Scholars tend to move away from applied fields during the freshman year. It will be interesting to follow these students through college and to determine how stable their career preferences turn out to be.

History is the strongest recruiter of new students among Scholars changing their field of study: 12 per cent of the "changers" intend now to study history and half of these were formerly in scientific fields of study. About 9 per cent are going into mathematics. English or literature, government or political science, and physics each recruited 7 per cent. Philosophy attracted 6 per cent.

DISCUSSION

In view of their extreme intellectual attainments it is perhaps not surprising to find that most of the changes in study plans among Merit Scholars are from applied to nonapplied fields. However, the tendency for Scholars to move from scientific to nonscientific fields was unexpected. This trend may be due to the fact that some high school students not really interested in science are being recruited by current efforts to increase the supply of engineers and scientists. The hope of winning a scholarship may also play a role in entering nonpreferred fields of study: a student seeking assistance may feel his chances of success are better in the present scholarship market if he proposes to enter a scientific field of study. Other possible interpretations will

occur to the reader: perhaps the quality of undergraduate science teaching is inadequate, or perhaps nonscience undergraduate teaching is relatively more stimulating or is far superior to what the student has been accustomed to in high school.

The present results suggest the importance of undertaking new research to identify those students whose college-going behavior will be most affected by scholarships. Although retrospective evaluations of the effects of receiving scholarships are difficult to evaluate, it does not appear that scholarship awards to the present sample of talented students has appreciably increased the number going to college. The prediction of "responsiveness" to scholarships is clearly a critical research area. More precise information is required about variables which interact significantly with scholarship assistance in terms of effects on the college-going behavior of the talented. Interaction effects of this kind would be useful in selection, for such information would indicate which students are likely to be most responsive to scholarship assistance. More definitive studies involving matched groups of Scholars and non-Scholars are now in progress, which should identify characteristics of responsive recipients.

While such studies can undoubtedly improve present methods of selecting recipients, we should at the same time be realistic in our expectations. College-going behavior is clearly the result of many decisions extending over the years; it may not be dramatically responsive to scholarship aid which is in the nature of a windfall in the senior year of high school. The Educational Policies Commission has noted that "the economic barrier to advanced education and professional careers rarely represents itself suddenly at a critical moment of decision" (4, p. 24). In the same vein Berdie argues that in order for scholarship programs to increase materially the number of qualified students attending college *"such programs should take into consideration not only the making available of funds, but also the creating of the desire to attend college.* Scholarship programs might well be announced to high school students long before the senior year, perhaps while the students are still in junior high school" (2, p. 81) (author's italics).

There is not only a need therefore to obtain more direct behavioral evidence of the effectiveness of scholarships as means of increasing college attendance; it is also desirable to plan for a continuing program of evaluation in which the cumulative effects of scholarship aid

and increased familiarity and understanding of scholarship opportunities among students, teachers, and parents can be assessed.

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Research and the Registrar*

WALTER ADAMSON

I RECALL quite distinctly the first Registrars' Meeting I ever attended. That was in Philadelphia in 1948. I remember many of the people I met there, the excellent Pennsylvania Dutch dinner served by the Limerick Volunteer Fire Department, and the talk by Vice President Gladfelter of Temple University on "The Pennsylvania Dutch—by One of Them." Strangely enough, in addition to the people and the food, I also remember some of what I heard about the role of the registrar in research and institutional planning. At that time I was serving as Director of Adult Education and Public Relations at a college in Connecticut and had decided to attend the Conference primarily for my own professional benefit.

You will realize the thimbleful of understanding I had about the operation of the registrar's office when I tell you of my surprise at hearing speakers make mention of the "gold mine of research materials" in the office of the registrar and of the "veritable mountains of vital information gathering dust in the records vaults." I wondered why those engaged in admissions and registrar's work did not dig in and capture these important data for institutional use. During the next eight years I had a golden opportunity to learn why. For in January of 1949, I assumed the post of Admissions Officer and Registrar.

What I have to say regarding the problems I faced and my reaction to them is probably an old story to many of you. The office was understaffed; the bulge of veteran enrollment overwhelmed us; we were ill-equipped even to keep up with the day-to-day operations. And, besides, the administration could afford to devote but little attention to future planning. The solution of the more immediate problems was far too urgent.

After several long and hectic years the influx of veterans subsided, enrollment declined somewhat, and college administrators, together with harried registrars, began to wonder how they could have handled the veterans' bulge more effectively. This concern grew as it became apparent that a sharp upturn in the birth rate held promise of a second and far greater influx of students in the years ahead. Careful

* Presented at the meeting of the Pacific Coast Association of Collegiate Registrars and Admissions Officers, San Francisco, California, November 12, 1957.

planning became imperative. The American Association of Collegiate Registrars and Admissions Officers was alert to this situation. Ronald Thompson did some noteworthy research on the problem, and AACRAO published the report entitled, "The Impending Tidal Wave of Students." This graphic presentation attracted the attention of college presidents, deans, and other educators throughout the nation. It helped to channel their thoughts toward the significant role which the registrar's office can play in facilitating institutional planning through research on the mountains of data continually available to them.

Thus, particularly since 1954, there has been an ever-increasing emphasis on research as it pertains to all phases of registrars' activity. This includes the whole gamut from recruitment and admission to retention and graduation, as well as many other concomitant functions. The studies often started on an informal basis in the registrar's office, and later there was participation by other divisions of the university. Now there are many examples of research being conducted on a co-operative basis by several institutions.

I am convinced that if there is any group in America today already well aware of the great wave of students about to descend on our institutions of higher education, it is the registrars and admissions officers. You know the pressure that is being brought to bear on you already. You know that this pressure will increase in the years ahead. Along with the pressure for admission comes a host of allied problems: planning for better utilization of space, planning new construction programs, planning broader programs of instruction, and so on.

Notice that I used the word "planning" several times. Research is the first step in planning. I should say, in *successful* planning. Without research, the result of any course of action may well be chaos. Stephen Leacock, the delightful humorist and teacher, expressed this idea when he described the confused hero of one of his stories in these words: "He flung himself from the room, flung himself upon his horse, and rode madly off in all directions."

Research in education is an absolute necessity if we are to meet future demands. Time and money spent in research is repaid a thousandfold in the long run. This has been proven time and time again in science and in the academic disciplines. Modern industry attests the importance of research in increasing production, distribution, and sales. However, until recently, there has been no need for intensive

research in many areas of education. For example, space planning has not been an urgent factor in most institutions. The need for research in college admission and retention has not been imperative until recent years.

I am not saying—nor even implying—that educational research is a new development or that it is something we have ignored in years past. But the point I believe to be so important is this: never before has the need for research in education been so great as it is today. Furthermore, tomorrow it will be even more important. Indeed, far into the foreseeable future, the solution to many of our persistent problems will be found only through comprehensive research projects and studies.

The Saturday Review of Literature, in one of its September 1957 issues, had as a lead article an "Annual Education Survey" by Fred M. Hechinger. After mentioning several of the perennial problems in education such as the teacher shortage, the impact of additional enrollment, and the need for future planning, Mr. Hechinger says:

> Research remained a sore point. While the Government's spending for research had increased from $166,000,000 to $3,500,000,000, within twenty years, little of it went to education. Last year the U. S. Office of Education let $500,000 in contracts. But John H. Fischer, the able superintendent of schools in Baltimore, said: "It would be a wonderful step forward if we were to devote as much money to research on better ways to teach our children as we regularly spend on finding better ways to raise our crops and breed our cattle."

II

In mentioning that "last year the U. S. Office of Education let $500,000 in contracts," Mr. Hechinger was undoubtedly referring to a new venture of the Office of Education, namely, the Cooperative Research Program. This constitutes the first effort on the part of the Federal Government to encourage and support essential research specifically on problems of education. The Program resulted from the desire on the part of the Office of Education to provide a greater body of tested information regarding some of the many problems facing educators in every community and at all levels of education. It has been my good fortune to be associated with this Program almost since its inception. As Senior Research Coordinator, I am responsible for negotiating contracts with colleges and universities and State departments of education for the performance of research projects.

It is also my privilege to visit various institutions and agencies to observe the progress of research supported by the Program.

During the first year of operation, the Cooperative Research Program had only $1 million to use for research contracts; in the current Fiscal Year, this has been increased to $2.3 million. A total of 112 contracts has already been entered into with more than 60 different institutions of higher education or State departments. These are distributed in some 30 states, Alaska, and the District of Columbia. The personnel engaged in research supported by the Program totals over 400 on a full- or part-time basis. Obviously, this is already a big program, and its impact is being increasingly felt in educational circles. I like to think of the way the dean of one of our Midwestern colleges of education described it. He said that this program is the most significant educational development of our age.

In brief, the Cooperative Research Program is a means whereby the Federal Government can enter into productive partnership with colleges, universities, and State agencies in studying educational problems. Proposals for research are submitted to the Office of Education, where they go through a procedure comparable to that of "selective admissions." If the project is approved, the Office allocates a sum of money; and an additional sum, usually a smaller amount, is provided by the institution or State. For example, the estimated dollar value of the "on-going" research is $8 million. By "on-going" we mean research programs which are now in progress and will continue beyond the present fiscal year. The participating institutions or agencies are to contribute more than $3 million of the total cost.

The Cooperative Research Program is restricting its efforts to probing several of the relatively unexplored "dark continents of education." In order to invest the taxpayers' funds as wisely as possible, the Office decided to identify some of the more critical problems and to emphasize research in these areas. After receiving suggestions from an advisory committee, from specialists within the Office of Education, and from consultants at colleges and universities, ten areas were selected. Interestingly enough, one of these has to do with retention in the broadest sense of that word. Specifically, the topic is stated as follows:

> Retention of students in schools and colleges—continuation in the educational program until students reach their maximum levels of development.

During the past year the Office agreed to help underwrite nine research projects in the general area of student retention. Time does not permit me to discuss all of them with you, but you may be interested in knowing the places where this research is being conducted and who the project directors are:

Institution	*Project Director*
Southern State College Magnolia, Arkansas	Dr. Dean C. Andrew, Director of the Counseling Center
University of Texas Austin, Texas	Dr. Carson McGuire, Professor of Educational Psychology
Indiana University Bloomington, Indiana	Dr. Wendell W. Wright, Dean, School of Education and Vice President of the University
Iowa State Department of Public Instruction Des Moines, Iowa (jointly with University of Iowa)	Dr. L. A. Van Dyke, Professor of Education, and Dr. K. B. Hoyt, Professor of Education, University of Iowa
Division of Higher Education Office of Education U.S. Department of Health, Education and Welfare Washington, D.C.	Dr. E. V. Hollis, Director, and Dr. Robert E. Iffert, College and University Administration Branch
University of Minnesota Minneapolis, Minnesota	Dr. William H. Edson, Director of Student Personnel
University of Minnesota Minneapolis, Minnesota	Dr. Walter W. Cook, Dean, College of Education
University of Chicago Quincy, Illinois	Dr. Paul H. Bowman, Research Associate, University of Chicago and Chief Consultant, Community Youth Development Project
University of Wisconsin Madison, Wisconsin	Dr. J. Kenneth Little, Director, Institutional Studies

If you are especially interested in any of these projects, you should feel free to communicate with the director at the institution concerned.

I regret to say that at the moment we do not have available the results of these various projects. Most of them are of two- and three-year duration, and the final reports will not begin to come into the Office until next year.

There is one project to which I would like to invite your particular attention as its results will undoubtedly have a specific application to the work in which all of you are engaged. This is the study entitled, "Factors Related to Application, Admission, Registration, and Persistence in College." It is essentially an outgrowth and extension of the Office's college student retention and withdrawal study which began in 1953 and the results of which are now in the press. At the moment this new project is the only one within the Cooperative Research Program which is being co-ordinated and directed by the Office of Education, although the work is being carried out at 20 diverse colleges and universities.

Recognizing that the "no show" is a perplexing problem for all institutions, and, most particularly, for the registrar who is faced with the problem either every quarter or every semester, the Office initiated this project in the hope of isolating some of the factors which contribute to the dilemma. The objective then is to come up with suggestions for minimizing the disturbing effects of the student who does not "show." As a former Admissions Officer and Registrar, I join with Ernest Hollis, Earl Iffert, and others in our Division of Higher Education in looking forward to receiving the results of this study. The co-operating institutions will turn in their final reports shortly after April 1, 1958, and the interpretative analysis will then be prepared, we hope, in time for use during the 1958-59 college year.

III

As I sat in my office back in Washington, reflecting on the growing importance of educational research, I was struck by the relationship this Program bears to you. Selection and retention are words of vital concern to you at present. The thoroughness of the research done in these areas will have a direct bearing on how well you meet the problems of tomorrow. Careful analysis of the factors involved is as important to you professionally as research in jet propulsion is to an aviation engineer.

The mere recognition of the fact that research is important is not

enough. The logical question which follows is: "What can I, as registrar or admissions officer, do to help?" The answer is not easy, but three general suggestions do come to mind.

First of all, the registrar can lay a foundation for research in his own office. From personal experience I know that this is easier said than done. Many admissions offices are still grievously understaffed and grossly overworked. Research under such conditions is difficult, but the time and effort spent in gathering research data will make the registrar a far more valuable administrative officer. Intelligent research leading to concrete results is certain to result in the accumulation of information vital for future institutional planning. Another end product could well be further gains in prestige and importance for the office of the registrar.

A second way in which the registrar can help in research is through co-operation with other institutions or with State departments of education. Isolation in research may tend to distort: it can magnify a point here, minimize another somewhere else, and contribute to a false conclusion. The exchange or comparison of data among registrars and admissions officers from various institutions would add depth to the findings. Dr. J. Robert Oppenheimer once said, "The gossip of scientists who get together is the lifeblood of physics." Appropriately paraphrased, this might read, "The gossip of registrars who get together is the lifeblood of research for institutional planning."

My third suggestion is really an invitation to you to keep in touch with the Cooperative Research Program and to give it your wholehearted support. We welcome your suggestions and ideas, as earnestly as we solicit your projects. As the Program continues to grow, we hope that many of your institutions will be participating by carrying on research projects with support from the Office. We look forward to receiving any proposals for research which you or your colleagues may wish to submit.

The future of higher education is bright with promise and electric with challenge. This is a stimulating period in which to be connected with higher education. Maybe you will not always agree when, at the end of a day of trying to select the 500 most deserving students from among 2,000 applicants, you make your weary way home, feeling like the boy who tried to pile two quarts of ice cream into a one-quart stomach. You may then be inclined to argue the point about being able to do research as you increase your workload and the higher-ups

do not increase your office force. My one concern is that interest in retention may decline as the tidal wave hits. That is the very time when the need for research will be critical. Planning, based on continuing research, will be essential so as to provide maximum opportunity for every student and to insure the fullest utilization of facilities. I do hope that, no matter how pressed you may be, you will always keep alert to the importance of your research activities.

The way to provide guidance, direction, aim—or whatever you wish to call the intelligent motivating force of a sound educational system —is through research. Research will show us the way to go and the best method to use in getting there. Research is the key to a successful educational program. I do believe that you, along with the other educational leaders in our colleges and universities, will continue to make a vital contribution to research. Your efforts will be of help in finding the answers to some of the serious problems facing us in education today.

Assumptions Underlying Scholarship Proposals

RALPH F. BERDIE

INCREASING attention has been given to suggestions that more and larger scholarship programs will help this country use its manpower resources more effectively. The writer recently attended a hearing before the Sub-Committee on Special Education of the U. S. House of Representatives, where those who testified regarding federal scholarship programs often made several assumptions, frequently without being fully aware of the nature of these assumptions.

They assumed that a large proportion of well qualified high school graduates do not attend college; that this number was large enough so that some action was called for; that a primary cause for this was financial, and finally, that more loan and scholarship funds would result in a greater number of competent high school graduates attending college. What is the evidence concerning these assumptions?

The first assumption is well justified. Many competent high school graduates do not attend college. Wolfle (1) estimates that in a given age group, 79 per cent begin high school, 68 per cent complete high school, 20 per cent begin college, and 12 per cent graduate from college. He also estimates that of all persons in an age group who have ability equal or superior to that of the average college graduate, 98 per cent enter high school, 93 per cent complete high school, 44 per cent begin college, and 35 per cent graduate from college. According to these figures, almost all who are at least as competent intellectually as the average college graduate begin high school, but slightly less than one-half of this high-ability group begin college. Of every 100 pupils who most likely have more than enough ability to do college work, 56 do not even begin college.

What are the figures when we study a more selected group of pupils? If we take those who presumably have enough ability to do advanced graduate and professional work in universities, about 99 per cent begin high school, 97 per cent complete high school, 53 per cent enter college, and 46 per cent graduate from college. Thus, of our very brightest people, slightly more than one-half begin college and slightly less than one-half obtain an undergraduate degree.

Studies in Minnesota have shown that the figures in that state are

similar to those of the entire nation. Of Minnesota high school graduates of 1950, 36 per cent were planning during their senior year in high school to attend college (2). Of the Minnesota students who had superior ability for college work (the upper 15 per cent of high school graduates), 68 per cent planned to attend college. A sample of these superior students was followed up one year later, and the proportion who attended college was approximately the same as the proportion who planned to attend college. Four years after high school graduation a sample of the total group of 1950 high school graduates was studied, and at that time 37 per cent reported they had attended college (3). Of the superior high school graduates, those in the upper 15 per cent, about 68 per cent, reported they had attended college within four years after high school graduation, approximately the same proportion planning to attend college originally.

In Minnesota today, of the 40,000 high school graduates each year, at least 6,000 have superior intellectual ability and could do better than satisfactory work in almost any college. Approximately 4,000 of these pupils will attend college. Thus, a group of approximately 2,000 pupils each year has more than adequate ability to do well in college and yet never attempts higher education.

In 1954, approximately 1,356,000 pupils graduated from U. S. high schools. The upper 15 per cent of this group would consist of 203,400 pupils. Using the proportions found in Minnesota, if one-third of these did not enter college, 67,800 pupils of ability failed to obtain higher education.

What of the second assumption, that this number is great enough to constitute a social problem requiring action? In a citizen-centered society, as long as any qualified persons who wish for higher education are unable to obtain it, a social problem exists. The significance of the social problem, however, is partly determined by the country's and society's need for those with higher training in education. America's demand for well trained and well educated people has increased many times during recent years, but this increase has been accompanied by an increase in the country's educational resources.

A review of some figures reveals the expanding educational resources of America (1, 4). From 1930 to 1950, the population of this country increased by 23 per cent. The number of Bachelor of Science degrees in engineering granted in 1950 was 575 per cent greater than the number granted in 1930. The number of employed

engineers in the latter year was 148 per cent greater than in 1930. The number of scientists who had Ph.D.'s had increased by 225 per cent.

During the twenty-year period, the proportion of persons in these fields increased, as well as the number. For instance, from 1926 to 1930, of all bachelor's degrees granted, 7 per cent were in engineering; while from 1946 to 1950, 11 per cent were in engineering. The total number of bachelor's degrees increased by 158 per cent from the 1926 four-year period to the 1946 four-year period. The number of degrees given in engineering increased by 311 per cent, the number of degrees in the natural sciences by 122 per cent, the number of Ph.D.'s by 141 per cent, the number of Ph.D.'s in the natural sciences by 109 per cent, and the number of Ph.D.'s in engineering by 687 per cent.

Interesting also are similar increases in our secondary school enrollment. The number of students in high school increased by 86 per cent from 1928 to 1949. Published (5) as well as unpublished data at the University of Minnesota, suggest that in spite of this increase in the relative number of high school students, the average student in 1949 was at least as capable intellectually as the average student of earlier years. The number of students enrolled in relatively difficult scientific and mathematical courses in high school has increased greatly in spite of much attention that has been given recently to relatively small *proportionate* decreases in students taking certain courses. As an example, much attention has been given to the fact that from 1928 to 1949 the proportion of all high school students taking algebra dropped by almost one-third, but little attention has been given to the fact that the *number* of pupils taking algebra increased by 42 per cent and the proportion of students taking trigonometry in high school increased by about one-third.

These figures suggest that perhaps we do not at this time face a crisis, but rather a continuing development that has extended over a long period of time. Any scholarship program should not be considered as an emergency action to meet a crisis situation, but rather should be conceived as a carefully considered effort to reinforce this long-term trend. It should enable an increasing number of young Americans to obtain the kind of education and training from which they are competent to benefit.

Is lack of money the reason many competent students do not attend

college? The study of Minnesota high school graduates in 1950 suggested that 58 per cent of high ability students not planning to attend college would change their plans if they had more money (2). Approximately 50 per cent of these students said they would attend college if they had enough money to pay about one-half of their expenses. If it costs a student approximately $1,500 a year to attend college, scholarships or grants of approximately $750 would be required to encourage these people. Let us speculate for a moment. It was mentioned earlier that there were 2,000 Minnesota students of high ability who had no plans to attend college. Approximately one-half of these students, or 1,000, might be encouraged to attend college if they were provided with scholarships. Thus, for a group of this size, a scholarship program would cost about $750,000 a year, not including the cost of administration. Eventually, four such groups would be going through college in any one year at a scholarship cost of $3,000,000 a year. Undoubtedly, many of these scholarships would go to students who now attend college, so that such a program would not increase the number of university graduates by 1,000 a year, but rather by a figure considerably smaller than this.

Whether $3,000,000 should be spent each year for a state scholarship program depends in part upon other needs for those funds. For instance, at present 250,000 pupils attend Minnesota high schools. For $3,000,000, five hundred school counselors could be employed at $6,000 a year, or one counselor for each 500 pupils. These 500 counselors, added to those now employed, would bring the counselor-pupil ratio to about the recommended size. Effective counseling and guidance programs in our high schools well might increase the number of competent persons entering college far more quickly and effectively than any scholarship program and might serve many other purposes as well.

II

In Minnesota the extent to which economic and noneconomic conditions influence plans to attend college was studied. Evidence was found that noneconomic conditions influenced college-going plans at least as much as economic resources.

A group of 940 students of high ability were identified who came from homes where fathers were skilled tradesmen or factory workers. Comparisons were made between the homes of children who planned to attend college and the homes of children with other plans. In the

former group were found more books, more magazines, and parents with more education. Indices of family cultural status were equally as good, and in some cases slightly better predictors of whether children would go to college than were indices of family economic status.

Thus, lack of money is only one thing that influences students of high ability not to attend college. Many competent pupils do not plan to attend college because they lack money, but other conditions may be equally or more important for large numbers.

Will increased scholarship and loan programs result in a larger proportion of competent high school seniors attending college? About 20 per cent of veterans on the GI bill said that without that financial support, which amounted to a government scholarship, they would not have attended college (6). One cannot generalize easily, however, from that group to a group of contemporary eighteen-year-old high school graduates.

How effective a scholarship program is depends upon the nature of the program and upon its administration. Large sums of money made available to high school seniors upon a competitive basis well might result in only a small increase in the proportion of persons attending college. True, this might benefit many now going to college, and allow them to obtain better educations, as hundreds of thousands of ambitious and hard-working students today earn much of their own expenses, often at the cost of their own education. These students spend less time on studies and other collegiate activities and more time on outside work, and consequently obtain second-rate educations in even first-rate institutions. Students who now attend college include a large proportion, perhaps two-thirds, of the most competent and most ambitious students, and these are the ones who would win many new scholarships.

A comprehensive scholarship program to be effective must provide for the early identification of competent students, perhaps as early as in the ninth grade, and must also provide for systematic work with students and their families long before the final years of high school. Only in this way can families and students be motivated in the direction of higher education.

An effective college program would give students the feeling that they were actively contributing to the cost of their education and at the same time it would provide educational benefit and value. Many

college and university faculty members and administrators remember favorably their experiences with students on the National Youth Administration Program prior to World War II. This method of subsidizing students provided an opportunity for them to feel that they were contributing significantly toward their own education and at the same time gave them an opportunity to work on college campuses and to work closely with their teachers and fellow students. This program also provided a means for interesting students of high ability in college and university work, eventually leading to the increased staff that will be so important as enrollments rise.

III

The preceding discussion of these assumptions leads to the conclusion that increased funds must be made available to supplement existing scholarship and loan funds for university students. Making more money available, however, and doing no more, will do little to achieve the purpose of increasing the number of competent students who attend universities. This can be done by first identifying talented students early in school and then providing them with counseling that will result in increased motivation for continued education. Students, parents, counselors and teachers must know of available scholarship programs while the student is in his early high school years. The number of trained counselors in American high schools well might be doubled if this objective is to be reached. Scholarship programs can serve their purpose only if university students on such scholarships take appropriate courses in appropriate institutions and under proper conditions. Again, this emphasizes the need for more and better counseling programs in colleges and universities.

The need in this country is not primarily for well trained persons in any one field, but rather for well trained and well educated persons in all fields. Large scale scholarship programs must allow each recipient to select the area of training most appropriate for him in terms of his abilities and interests. The use of such scholarship programs to divert people into specific fields because current shortages exist, would, in the long run, provide a far greater hazard to the welfare of the country and its citizens than do current shortages. The kinds of specialized training people will need twenty or even ten years from now cannot be predicted, but we can predict that the need will increase for well and broadly educated people in many fields. The solu-

tion to our problem is not to have more persons enter a few fields, but to have many more persons obtain higher education.

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Student Reactions to Late-Afternoon Classes

ARVO E. JUOLA

The Problem. With rising enrollments and limited classroom space, student reluctance to enroll in late-afternoon classes creates a serious problem in efficient utilization of existing facilities. Admittedly, sufficient pressure during registration provides a simple remedy, but students with bona fide reasons for requesting special programs are not easily identified. Furthermore, persistent coercion of this kind is a source of continual irritation to departmental representatives and students. A study was therefore initiated at Michigan State University to assess the reactions of students toward late-afternoon classes in the hope that more satisfactory programs might then be proposed. Because of the obvious relation of student employment to the problem, student employment as a factor was to be studied in some detail.

The Study. Data were obtained from two basic sources:

1. Selected student groups were asked to consider the problem and verbatim records were made of these problem-centered discussions.
2. Two questionnaires were distributed, one at registration for Fall, 1956, and the other at the following Winter Term registration. These questionnaires, developed largely from views expressed by the student discussion groups, were designed to provide data on class-hour preferences and on bases for these preferences. In all, 4,227 completed questionnaires were secured from full-time undergraduate students in the fall-term survey (90 per cent return) and 638 questionnaires in the winter-term survey (50 per cent return).

Attitudes Toward Class Hours. On the fall questionnaire, students were asked to check the hours they prefer for classes and also hours they like to avoid. To reduce these indications of attraction and avoidance to one common figure, the percentage of students checking an hour as one to avoid was subtracted from the percentage of student checking the same hour as one they prefer. This procedure yields a scale in which a zero value signifies a neutral feeling toward a class hour, positive values connote preference, and negative values distaste. Figure I presents a profile of student reactions to classes at different hours in the day.

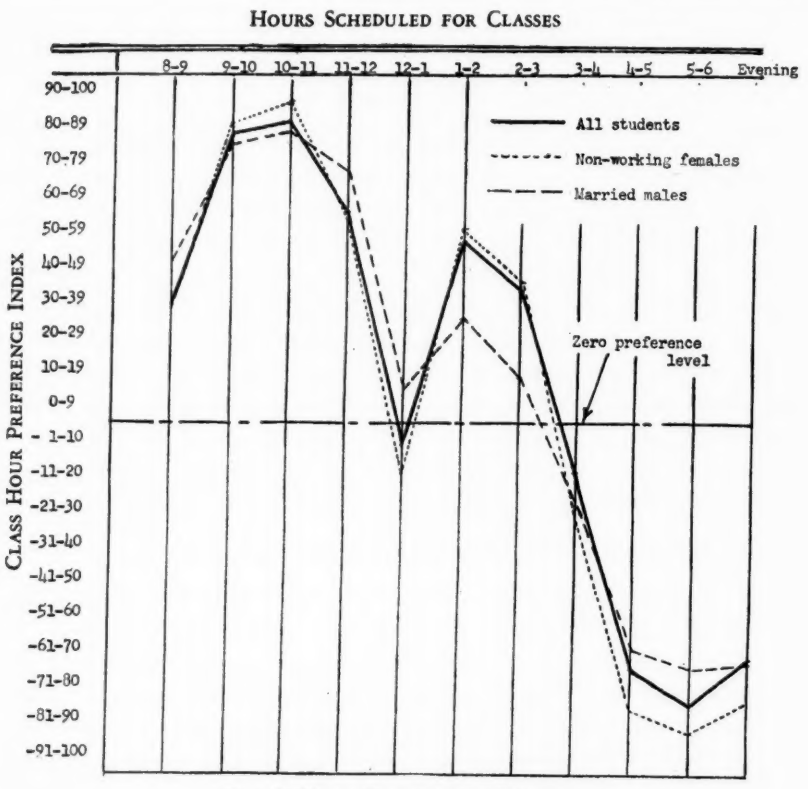

Fig. I. Hour Preference Profile

Obviously, 8, 9, 10, 11, 1, and 2 o'clock classes were preferred by students and 12, 3, 4, 5, and evening classes were generally in disfavor. Furthermore, this general preference pattern was characteristic of all student groups studied, with only slight variations in intensity. Female students, particularly non-working females, exhibited the most pronounced profile (highest rejection of late-afternoon and lunch hour classes and greatest preference for morning and early-afternoon classes). The flattest profile was found for the married males. The profiles for these two groups are superimposed in Figure I to show the limits of variation found among different college groups. Non-working students exhibited the extreme pattern more than students who work. Differences among class levels were small but the more peaked pattern was found at the sophomore and junior levels. Differences among major college groups were negligible.

In general, the class preferences profile seems to present a university-wide reaction toward classes at specified hours. Perhaps the profile can be considered "the collegiate way to feel." Since the preference pattern does not level out toward the end of the collegiate career, the reaction cannot be dismissed as "immature." Furthermore, the extreme pattern seems to be more characteristic of students who are logically more closely bound to the university community (unmarried students and non-workers).

Bases for the Attitudes. No single reason seems to account for these preferences. When asked to check activities which conflict with class hours, less than 60 per cent of the students specified an activity. Furthermore, no one activity was checked as a source of conflict by more than 10 per cent of all students. Among specific university subgroups, sorority and dormitory activity was cited as a possible conflict by 17 per cent of all women and by 20 per cent of the single women. Athletics were checked by more than 10 per cent of the men.

Bases for the class hour preferences, apart from conflicts with organized activities, were surveyed in the fall questionnaire by having students check any or all of thirteen commonly expressed reasons for liking or disliking class hours. The tabulations showed that eleven of the statements listed had appeal to at least 20 per cent of the students. The statements, together with the percentage checking them, were:

"I'm fresher in the morning" (55)

"I like my afternoons free" (54)

"I like blocks of time for study" (43)

"I'm more alert in the late morning or afternoon" (28)

"It's easier to study in the afternoon" (26)

"Certain hours seem 'just right' for lectures, others for labs, others for recreation" (25)

"It's easier to study in the morning" (24)

"The week end is shortened" (23)

"I like free periods after PE or ROTC" (22)

"I like to space my study over different periods of the day" (21)

While the validity of these reasons can be readily questioned, the data do suggest a multiplicity of bases for student reactions. Related data were collected in the winter questionnaire, when a free response to the following statement was requested:

> Because enrollments are rising, large numbers of students may be forced to schedule classes in the late afternoon (3-6 P.M.). How

would classes at these hours affect your program of activities? Consider your reactions this semester as well as in the Spring semester.

Responses were classified by degrees of inconvenience implied. Working males, working females, non-working males, and non-working females were considered independently in the analysis. The percentage of students who fell into each classification is presented in Table I.

These figures show that from 12 to 42 per cent of the students in

TABLE I

PERCENTAGES OF STUDENTS WITH VARYING DEGREES OF CONFLICT WITH 3-6 P.M. CLASS HOURS

	Working Males (N-166)	Working Females (N-39)	Non-working Males (N-160)	Non-working Females (N-80)	All Groups (N-445)
A. Creates a serious problem.....	42	28	20	12	28
B. OK, but on condition.....	15	8	4	9	9
C. Inconvenient but manageable..	20	36	29	42	29
D. Little or no effect.....	19	21	37	30	28
E. No response.....	5	8	9	8	7
Total Group.....	101	101	99	101	101

each of the four groups feel that major problems would be created by classes in the late afternoon. Little or no inconvenience seems to reflect the views of 19 to 37 per cent of the students. The conditions mentioned by students whose responses were classified into Category B centered about avoiding classes on a given day or grouping classes in the afternoon in order to reserve a block of time at another part of the day.

The reactions in the "serious problem category," however, has most direct relevance to the purposes of this study. Obviously a large proportion of the working group, particularly the working males, feel classes from 3-6 create a serious problem, since 42 per cent of their responses fall in this category. Not all of these conflicts can be attributed to vocational causes however, since non-working males also experience some difficulty in scheduling 3-6 classes. By subtracting 20 per cent (the per cent of non-working males who feel a serious conflict is created) from the 42 per cent figure for working males, the 22 per cent figure remaining may be considered as the possible percentage of students who face a serious problem in scheduling be-

cause 3-6 P.M. hours conflict with working hours. For convenience, the range of 20-25 per cent may cover students affected for this reason.

Additional data to support this "occupational conflict" figure were obtained from another question on the winter-quarter survey which asked students to check one of three degrees of flexibility in the hours they were scheduled to work. Here, 33 per cent of the employed males considered classes during the hours they were now scheduled to work a "major hardship," while the remainder believed that a schedule of this kind to be only an inconvenience or to have no effect at all. Since conflicts at all hours in the day were implied in the question, and since the majority of working males, but not all, work afternoons, the proportionate numbers of conflicts with 3-6 working hours would probably fall near the range of 20-25 per cent.

These figures show that part-time employment during the school year is a potent factor in keeping students from scheduling late-afternoon classes. Relative to the total enrollment at M.S.U., the number affected is comparatively small, however. Less than 10 per cent of all males are seriously affected and a much smaller percentage of females seems to face serious conflict from 3-6 P.M. classes and hours scheduled for employment. Since 20 per cent of the non-working males and 12 per cent of the non-working females also believed classes from 3-6 P.M. create serious problems, conflicts with other curricular and extracurricular activities must be considered.

Reasons given for these conflicts are too numerous to list, but seemingly bona fide reasons included conflicts with sports, activities, and commuting to and from home. Less convincing reasons, but undoubtedly as influential from the student perspective, included time for errands, tiredness, week ends at home, time to relax before dinner.

A small number included statements about their spring program in their responses. In these, the large majority considered late afternoon classes in the spring as increasingly undesirable, but specific reasons were seldom given.

In summary, the data show that the proportion of students who react against 3-6 P.M. classes is large. Furthermore, the proportion is highest among student groups who at the present time have fewer bona fide commitments at these hours. This general dislike of late-afternoon hours by the bulk of the student body bears little relationship to vocational patterns or to activities which may be scheduled

at these hours although selected groups can better justify their feelings. The relatively large numbers of students checking intangible stereotyped bases for their feelings suggest that students can, on demand, supply reasons for their feelings; but it is quite possible that for many the true reasons for the avoidance of classes at certain hours have no single rational basis. While the reasons checked in the fall provide some insight into the feelings, as do the generally incomplete free responses in the winter survey, other reasons such as "being available for bull sessions in the living quarters" or "anticipation of activities which might crystallize later (especially in the spring)" all probably enter the scene as determiners of the class-hour attitude.

Possible Programs. Although the data presented are limited, they suggest that *existing* student attitudes toward classes at various hours make rather arbitrary schedules necessary with exceptions permitted only on the basis of verified excuses. Without this compulsion, colleges would operate on a six-hour day. It is possible, however, that the attitudes can be revised. Possible methods for changing attitudes follow:

1. Programs may be planned to associate late-afternoon classes with positive benefits, rather than reinforcing student views about late-afternoon classes being "an evil which all must sometimes be forced to endure." For example:
   a. Afternoon classes may be scheduled early in the final examination period, and this fact publicized.
   b. If sections are usually smaller in the afternoon, the values inherent in small classes could be publicized.
   c. Academic advisors may try to develop schedules about students' major needs (work, activities, etc.), especially when the need is expressed in specific terms rather than "need morning classes." Perhaps a general indoctrination in scheduling problems might be an aid to advisors.
   d. Sufficient variety of classes in the afternoon may enable students to get a complete class load during these hours, making available a block of time for work or study in the morning.
   e. Afternoon classes meeting fewer days for longer hours may counter some of the negative influences that afternoon classes seem to possess.
2. The feasibility of evening classes could be explored more fully. Student reactions toward evening classes seem to be slightly less

negative than toward 5-6 classes. Evening classes meeting one or two days a week for one and one-half or two hours might find more favor than classes meeting more often during the day.

3. Publicizing the "crowded classroom problem" prior to registration might result in each student's realizing that the over-all administrative problem is more important than individual preferences.
4. Student committees could study the problem and propose an action program to remedy the situation.

Editorial Comment

THERE IS A STORY that Alexander Hamilton sent a letter to John Jay, then governor of New York, urging on him some political shenanigans that would result in an election as desirable to Jay as to Hamilton. Jay never answered the letter, never acted on the suggestion. He simply wrote a comment on it, and filed it away; and it was not until after his death that any one else knew anything about it.

Jay's comment explained why he never took action on Hamilton's suggestion. It was not that it was illegal: on the contrary, it was entirely within the law. It was not that it was immoral. While political morals are often mysterious, there is something to be said for the notion that a legal action is moral. Jay declined to follow Hamilton's suggestion because to do so, he wrote, would not be becoming.

No doubt Hamilton would have been baffled if he had learned of Jay's comment. He might well have been as mystified as many of us today at the very word *becoming*. Hamilton showed little indication in his conduct that he understood the term, and seems not to have let any such notion interfere with what he wanted to do. He might have considered Jay a prig, if he had not known Jay as well as he did. He was spared such bafflement, however, by never knowing more than that Jay paid no attention to him.

There is little point in speculating on what Hamilton or his contemporaries, or all his successors in American politics down to the present time, might have thought of Jay's point of view; but there is some point in taking a look at ourselves at least to the extent of discovering whether or not we know what the word *becoming* meant to Jay, and whether or not such knowledge affects us. As has so often been true in the past, those in high places give us no guidance. Perhaps we should not go so far as Mencken, who observed that he regarded all politicians as scoundrels; but it is obvious that there has always been a vast dearth of John Jays.

We should not look down our noses at politicians, however, and will hardly dare to do so if we begin asking ourselves where the John Jays are in our profession, our business, our neighborhood. If we get right onto our own campuses, we may find that students and faculty both are a little uncertain about what *becoming* means, or how to go about acting in a becoming manner. We usually know whether or not what we are up to is legal or illegal. We usually have a pretty good idea

whether or not our conduct is moral—at least we have our moral code to refer our conduct to if we want to find out. But do we know what is or is not becoming?

Here and there we find becoming conduct on our campuses, whether or not the phrase is known. In colleges where the honor system works, it may work because compliance is becoming. As I look back on a college where the honor system worked, I don't remember that any one was much concerned with the legality of not cheating. Of course, any one caught cheating would be immediately cited for expulsion by the student council; but it doesn't take much brains to get away with cheating if you want to cheat: if it did, there wouldn't be so much cheating in so many places. As a matter of fact, legality did not deter us from such lawbreaking as is common on many campuses, ranging from playing with the fire hoses to stealing signs.

Nor were we highly impressed by moral considerations. If we had been asked whether we thought it wrong to cheat, we would have said yes. We would have said the same thing about other matters, too, in which the moral consideration did not keep us from misbehavior. I doubt that many of us were great sinners; but I'm pretty sure that few of us could afford to point to ourselves as examples of moral superiority.

Yet we didn't cheat. We could have, but we didn't. Cheating was perhaps no worse than some of the things we did do; but we did those other things which we ought not to have done, and we didn't cheat. To violate the honor system was not becoming.

That college is not unique, but it is a member, apparently, of a minority. In some institutions it is even considered smart to get away with cheating on a big scale; it is a game to beat the minions of the dean's office. A feeling for what is becoming is not universal in our colleges and universities.

Considering the public performances of so many of their elders, the younger people have little incentive to behave in a becoming fashion. On the contrary, there is a dismissal of the whole notion in the common idea that since somebody is going to get in on it, it might as well be me. Social adjustment, no doubt.

Yet for all that, when John Jay or some one like him turns up, we admire him. We laugh at the fellow who successfully follows the main chance, and laugh at those who try to show that his conduct is illegal when it isn't illegal. We don't worry about the moral aspects of the

matter, perhaps because moral aspects have been tacked onto so many forms of behavior that we are fed up with them. We seldom think about whether or not conduct is becoming, even at the top. We laugh when some one says that unbecoming conduct in a Congressman is far less offensive than in a presidential assistant, because a Congressman has only one vote while an assistant has access to the head man. We laugh easily.

Still, we do admire the conduct of a John Jay. So perhaps while we are so busily engaged in remodeling American education, we might consider the possibility of encouraging such admiration to the point of emulation. It is possible, for it is being done, here and there. It is also practical: the more John Jays we have, the less opportunity there will be for the expensive antics of the Alexander Hamiltons—little, unable, rather pitiable Alexander Hamiltons, if we may consider such a paradox. And it is desirable, for it will increase our self-respect.

We are a bit short on self-respect. We respect our accomplishments; we respect our geniality, our generosity, our practical abilities, our high moral attitudes, our almost everything. Whether we respect ourselves is something else again. The amount of time we spend in respecting all our doings and their results, and talking about them, makes one wonder. Self-respect is not something that we can carry about for all to see, or even something that we can stand off and admire.

We can be pretty sure that John Jay indulged in little patting of his own back when he shelved Hamilton's proposal. It is unlikely that he so much as felt superior to Hamilton. He simply acted as his nature dictated. That was the sort of man he was. His self-respect took the form of acting like John Jay; and, as we know, it did not interfere with his living the good life, making a name for himself, and enjoying the friendship and esteem of his peers.

As long as we admire such a man, we can encourage emulation. We can educate young people to understand what is becoming. Whether we do or not depends on whether we want to.

S. A. N.

Book Reviews

W. G. B.

The Christian Idea of Education, ed. by Edmund Fuller. Papers and discussions in a Seminar held at the Kent School. New Haven: Yale University Press, 1957. Pp. xv + 265. $4.00.

The question of religion and its values seems again to have moved forward to a prominent place in the concerns which beset our minds at this mid-century. Education, being one of the more sensitive if not the most sensitive of our social institutions, is feeling the impact which religion's claim for attention is making whether in public or in private schools. As a manifestation of this trend, The Kent School of Kent, Connecticut, in observing its fiftieth anniversary, organized a seminar on "The Christian Idea of Education."

The eight major papers read at this seminar constitute a symposium in which as many important thinkers in the field participated. The distinguished names of the contributors reflect the importance which the authorities of The Kent School apparently attached to a consideration of this problem. They are as follows: the Reverend Dr. William G. Pollard, scientist turned priest, Executive Director of The Oak Ridge Institute of Nuclear Studies, who was chairman of the seminar; Dr. E. Harris Harbison, Professor of History, Princeton University; Mr. Alan Paton, novelist and humanitarian; the Reverend Dr. Massey H. Shepherd, Professor of Liturgics, Church Divinity School of the Pacific, Berkeley, California; the Reverend Dr. John Courtney Murray, S.J.; Dr. Jacques Maritain, Professor Emeritus, Princeton University; Father Georges Florovsky, formerly Adjunct Professor of the History and Theology of Eastern Orthodoxy at Union Theological Seminary, now associated with The Harvard Divinity School; the Reverend Dr. Reinhold Niebuhr, Professor of the Philosophy of Religion and Vice-President, Union Theological Seminary, New York; and the Reverend Dr. Stephen F. Bayne, Bishop of the Diocese of Olympia.

The book under review here presents the papers of these eminent personages along with various small sections of the interchange of comments and questions selected from reports of small discussion groups involving over five hundred invited guests.

The point of view in this book will have little interest or value for the vast number of educators who are engaged in the enterprise of public education in America, whatever level of education may be thought of, be it elementary, secondary, or higher education. The publicly supported schools of this country must of necessity be secular institutions, although not secular in the sense conceived of generally by these contributors to the symposium, that is, secular as opposed to sacred. Our public schools are

secular in the sense that this concept is opposed to that which is sectarian. It is generally agreed by all who understand the democratic way of life that there can be no orthodoxy in a democratic society, whether enforced by legal means or inculcated by an institution such as the school. The basic principle which must inform public education, if not other forms of education, in America must be, to use Horace Kallen's phrase from a recent book of his, "the parity of the different." As Father Murray states in one of the inter-paper discussions," . . . a Christian school is quite flatly and frankly an instrument of the Church and it participates, to some extent at least, in the mission of the Church, both as a prophetic mission and also as a pastoral mission." Obviously such a point of view can have no relevance for public education, for, in spite of all claims of religionists to the contrary, American society is a secular society and, to remain democratic, it can never be anything else. And in this lies its essence and its glory. To refer to it as "just secular," as one speaker in the seminar did, is to fail to understand it.

This is not to say that the participants in this seminar argued for the transformation of the public schools into religiously oriented institutions. And yet, the implication of this book seems to be that religiously based education is superior education. Some readers will very likely agree to this as they feel the impact of the storms and tensions which characterize our day. There will be some who will deplore, with Dr. Pollard, that "we live in an age when our whole civilization has in effect lost the capacity to respond to its Judaeo-Christian heritage" and that it would be a happy achievement to bring back a keen understanding of "the great Biblical themes of grace and providence, of sin and judgment, of the Lordship of Christ over history, of the contingency of all created things and moments on Him who stands above all creation." (There will be some, of course, who will view this as strange language for a physicist to be using, who will wonder at the bifurcation of personality which leads a physicist to such exhortation, and who will conclude that the human mind is indeed capable of remarkable compartmentalization.) Many who do not distinguish too sharply the function of education in a pluralistic society will respond affirmatively to Dr. Shepherd's theory of the educative value of liturgy, drawing, as he does, on the history of liturgy in the church as it has exercised its educative function and expounding, as he does, his interpretation of the Eucharistic drama as being an event in which "for once the will of God is done on earth as it is in heaven." Others, not only those with the Roman Catholic viewpoint, will applaud the persuasively intense manner in which Father Murray brings his erudition into play as he describes the encounter of Christianity with the intellectual world of Alexandria in the work of Origen. Still others will affirm with Father Florovsky, in his provocative paper "Faith and Culture," that the "real root of the modern tragedy is not that

people lost convictions but that they deserted Christ," and will agree with him that what should be recognized by Christians is "that Christian education should include *training for the age to come.*" (The italics are those of the reviewer.) Many will find an echo of their own thoughts in Alan Paton when he suggests that morality is dependent on the "knowledge and practice of faith," and will respond to his warmly presented thesis thus stated: "All I know is that for myself conduct and faith are locked together and that in me a period of faithlessness would inevitably lead to a change of conduct." And while Niebuhr, perhaps the most influential theologian this country has yet produced and the most sophisticated of the participants in this seminar, does not address himself directly to the problem of education, his insistence on the ambiguities of human history and freedom as distinguished from the necessities of the realm of nature will entice many readers of this book, as it has swept before it during the last twenty-five years many in the field of theology, to the conclusion that education must include the development of the consciousness of the inevitability of human sin and the necessity for deliverance from this sin through the mysterious grace of a forgiving and suffering God. To quote Niebuhr in a characteristic utterance: "Yet all human freedom contains the possibilities of both creativity and destructiveness. Human history is therefore bound to develop in both dimensions to the end."

Those, however, who are concerned with an answer to the problems of education for this age more comprehensive than that which is encompassed in the Christian idea of education will be interested in the questions raised by Professor Harbison of Princeton. He sees liberal education as having developed without special reference to Christianity although interpenetrated by Christianity through the course of history. His answer to the question "Can a liberal education be a Christian education?" is a "qualified yes" in the sense that liberal education can be "illumined by Christian faith," and he sees the possibility of "a working reconciliation between science and Christianity not unlike that reconciliation between the humanities and Christianity which was the work of Christian humanism in Erasmus's day." In his second question he raises a much sharper issue, namely whether "Christian education can be liberal education," using "liberal" in the meaning of "open-minded, above provincialism, receptive to new truth, eager for fresh perspectives." "How," asks Professor Harbison, "can a *Christian* education presumably beginning and ending in religious commitment, possibly be a *liberal* education in this sense?" (The italics are his.) This is a thorny question. Many early Christians, he points out, insisted "upon a firmness and precision of belief which would resist all erosion by secular philosophy and the natural reason." And again, in Professor Harbison's words: "A mind formed by the constant iteration and reiteration of set phrases is restless and disturbed in the presence of new

truth. The idea that there is a moral and spiritual value in openness to new truth can only appear subversive to such a mentality." Readers of this book will inevitably call to mind the examples of such teaching current in this country today—not, hopefully, in public schools—and will realize that minds so trained by indoctrination will be impervious to truth which may come from another quarter. These questions raised by Professor Harbison did not loom large in the consideration of the seminar. In fairness to him, some of the closing words of his essay should be quoted: "The right kind of Christian faith can flood a liberal education with meaning as light floods a Flemish painting and gives the scene coherence and significance. This right kind of faith will be an adventurous and inquiring faith, committed not so much to a particular church, a particular creed, or a particular ceremonial as to the person of Christ and to the Kingdom he proclaimed." No assent to this is recorded in the proceedings of the seminar.

This book will leave many readers in this our time unsatisfied; this was the experience of this reviewer. Granted that Christianity arose in an encounter with one of the great cultural crises of history and provided answers which were functional then, certainly the answers to today's cultural crisis cannot be the same answers. Man through science has found his environmental and his moral world to be different in essence from earlier views of that world. There is, therefore, good and sufficient reason to think that he should and can move out of old conceptions of himself and his world embedded in primitive myth into new and essentially different ideas about himself and his world and correspondingly about the kind of education necessary for his proper adaptation to the life to which he may have access in his world in the coming generations. Science has brought us more than powerful instruments for the examination of nature. It provides us with a way of thinking about all of the problems which beset us, and we have but to understand this method and to utilize it. It shows us that truth as singular has little power. On the contrary, the pursuit of truth, moving from truth to truth, can be almost all-powerful. The full impact of the rise of science upon the world has not as yet been felt or realized. Its full resources of method for mankind's benefit have not yet been exploited.

Furthermore, it still needs to be demonstrated that there is a special cosmic significance in human personality and human history. It is out of such a conception that the myths of religion have developed, and this it is which apparently drives Niebuhr, with all of his insistence on the proper view of myth, to the conclusion that it is only beyond history that history finds its fulfillment. The readers of this symposium will be surprised to find only one "voice," so designated without further identification, in one of the inter-paper discussions speaking thus: ". . . my feeling is that, frankly, I am not very much concerned about the future life; that in my school I am very much concerned about what goes on now, and I have a

feeling that our task is somehow to grow in spirit through unselfishness and through life devoted to the people with whom we are associated." This one lone "voice" speaks for a wholly different view than that represented by the main streams of thought in the seminar. There are elements in Christianity which could be put to service in the interest of what this "voice" was referring to. But a reading of the statements of these exponents of Christianity in this seminar, Alan Paton excepted—and he is not a theologian—encourages doubts as to whether it can or will shake off its encumbrances of myth and ritual to this end.

This reviewer cannot help thinking how much more full-bodied this seminar might have been had the participants included a Horace Kallen, a V. T. Thayer, an H. J. Muller, or a Julian Huxley.

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Walter B. Kolesnik, *Mental Discipline in Modern Education.* Madison: The University of Wisconsin Press, 1958. Pp. xi + 231. $3.50.

It has been several years since I have heard even the beginning of a debate over mental discipline. Professor Kolesnik points out that some contemporary texts on educational psychology no longer include a chapter on the subject. At the same time, he insists that the topic of mental discipline is very much alive.

Around the turn of the century, arguments over mental discipline or formal discipline (perhaps not quite the same thing) were common. Experimental psychologists cast considerable doubt on the possibility of mental discipline as interpreted by proponents of Latin and mathematics in particular, but, according to Kolesnik, they never succeeded in disproving the possibility. Yet the assumptions of practical educators that mental discipline is impossible led to great changes in the aims and curricula of the public schools.

Perhaps it is true, as Kolesnik suggests, that educators used the attack on mental discipline as a means of rationalizing changes which they felt impelled to make in the interest of adjusting education to modern life. The development of the "whole personality," the adjustment of the child to society, and the production of well-rounded citizens could hardly be accomplished except by the substitution of "practical" and "social" subjects for "intellectual" subjects. Whether or not contemporary school children are either well adjusted or well developed mentally is not the question. The fact is that the substitution did take place, and a chief argument for it was the impossibility of mental discipline or mental transfer.

Undoubtedly, the psychologists did cast considerable doubt on faculty

psychology—the idea that "the mind is a substantive reality having a number of powers or faculties such as memory, attention, observation, reasoning and will, and that these may be improved individually—as muscles are improved—through exercise." Undoubtedly, much of the teaching about the year 1900 engaged students in routine study and failed to open windows on the absolute. In other words, it was time for some kind of change. Undoubtedly, much teaching even at the present time is hardly more than an occupation and end in itself. (I should question whether teachers of algebra are wise, as some few whom I know are doing, to emphasize the manipulation of equations and to omit stated problems, and I have the feeling that much contemporary science teaching aims at little more than the production of technicians.) Undoubtedly, the educators by various means and for various reasons either killed off the hard courses or set up competitive courses, which they justified as practical or vocational or leading to social adjustment when the real justification was that the courses were easy. Undoubtedly, the easy courses (on the principle of cheap money driving out good money) came to be the means by which poor students could pass, mediocre students could win honors, and "good" students could loaf. Perhaps no one would any longer defend a course merely because it is hard. At the same time, no one has shown how even good students can get a real education without serious application.

In the recent arguments for general or liberal education, a great deal of emphasis has been placed on intellectual training. Professor Kolesnik identifies this with mental discipline. Up to a point, he is right. On the other hand, there seems to me to be a difference—at least in degree—between the study of courses for mental or formal discipline and the study of courses which make an intellectual approach to the great bodies of knowledge, to the solutions of problems, and to the forming of value judgments in our time. Professor Kolesnik succeeds in harmonizing the Harvard Report on General Education, Robert Hutchins, and John Dewey in the respect that they all "accept the possibility of intellectual training and agree that a major concern of the school is with mental discipline" and that all accept " 'the development of intelligence able to operate well in all fields and to deal with new problems as they arise' as a primary objective of education." If the disciples of the three schools agree, what a gay convention gathering of like-minded and like-motivated people we may look forward to! For fear of being an uncomprising and disrupting influence, I shall not even suggest where the convention should meet.

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Frank H. Bowles, *Report of the President, 1957*. The Annual Report of the College Entrance Examination Board for 1956-57. New York: College Entrance Examination Board, 1958. Pp. xiii + 141. Paperbound 50¢.

This *Fifty-Sixth Annual Report* of the president of the College Entrance Examination Board covers the activities of the Board for the period extending from July 1, 1956, to June 30, 1957. It is true that reports of this sort which are concerned with activities for the year past are out of date before the printed copies are available. But in our critical approach to these reports in retrospect we are to imagine that the future is to be seen as rolling up from behind us.

In this latest Report, Mr. Bowles concerns himself with such topics as the relationship of the Board with the Educational Testing Service; the Seminar on Admissions Information, held at the IBM plant at Endicott, New York, September 3-7, 1956; the fourth Colloquium on College Admissions, held on October 26-30, at Arden House, Harriman, New York; the annual and regional meetings of the Board; visitation of schools and colleges by Board representatives; Board publications; the College Scholarship Service; a foreshadowing of what will be contained in the report of the Commission on Mathematics; the use of Board tests for purposes of guidance; the use of Board tests in admissions; facts relative to the Scholastic Aptitude Test, the Achievement Tests, and the Tests of Developed Ability; the use of Board tests in placement; test administration procedures; the Advanced Placement Program; research activities of the Board; problems relative to Board membership; administration and personnel; Board finances; and a brief discussion of "Prospects Ahead—A Look at the Future." There are also the usual statistical tables and rosters of names, giving information on such subjects as the numbers of candidates tested, the number of score reports sent to specific schools, the location of College Board testing centers throughout the United States and abroad, the personnel of the various Board Committees, the names of the Board officers and trustees, and other factual information considered essential for a full reporting of the activities for the year concerned.

There is much in these annual reports that is always of general interest and value to registrars, admissions officers, and the college counselors in our secondary schools; but, in this present report such readers should find of particular interest and value the sections on "Visitation of Schools and Colleges," "Publications," "The Program of Tests," the "Advanced Placement Program," and "Research."

In their program of school visitation, Board representatives have visited approximately 60 secondary schools in the Cleveland and Chicago areas. These visits have been fruitful in supplying many insights into the needs

and desires of both the secondary schools and the colleges. Mr. Bowles states:

"Schools want and need more information about test interpretation on both the junior and senior class levels. They want more information about the characteristics of the freshman classes at the colleges to which they send their students, as well as more information about how colleges use test scores in admissions, placement, and counseling. Unfortunately, fear is paramount in the minds of many school people that the tests are the sole criterion of the admissibility of students."

In the past, the scores made by students on tests taken during their junior year of secondary school could be released to students as well as to the schools, but the scores on tests taken during the senior year were to be held in confidence by the schools and not released to students. "For a number of years the controversial issue of open score reporting to candidates, final as well as preliminary, has been under discussion at meetings of the Board and in committees." A new ruling of the Board now makes it possible for the release of scores made by students on tests taken during the senior year as well as on those taken during the junior year. Effective, therefore, with the tests to be administered in December of 1958, "colleges and schools" will have "complete discretion in the release of score information to their enrolled students." These test scores serve a dual purpose: they are not only a helpful factor in the admissions process, but they can also be extremely helpful to counselors and students alike in the matter of wise guidance leading to a realistic understanding of the colleges to which the student concerned might apply with at least an even chance of being accepted. But in this latter connection, Mr. Bowles writes:

"The subject of the use of the tests in guidance cannot be concluded without noting again that no test scores, however exact, will be really useful for the advisement of secondary school students unless counselors have information concerning the actual extent to which test scores affect admissions decisions of particular colleges. It is to be noted with pleasure and hope that at least a few colleges now seem inclined to reveal their actual standards of admission to the schools and that counselors are becoming increasingly sophisticated in supplying these data for themselves where they are not otherwise available."

In spite of the press and magazine accounts about the crowded condition of our colleges, the fact remains that for a number of years to come the good student will be able to gain admission to a good college, which may not, however, always be the college of his first choice. It is also true that a number of good colleges have not reached their quota of entering freshmen by the time that the results of the May test of the Board have been reported. The traditional summer testing date in August having proved inadequate for the needs of such institutions, a special summer

rental plan for the Scholastic Aptitude Test was tried out experimentally in 1957. "In general, this plan provides that a single form of the SAT be made available to colleges for administration upon two specific dates in each of the months of June, July, August, and September." This arrangement for tests that can be given at intervals over the summer months has been found to fill such a real need that "it is expected that the Board will be asked to adopt the plan as a regular part of the testing program and to eliminate the August series entirely."

The Advanced Placement Program has met with a particularly enthusiastic reception. "At the end of its second year under College Board auspices, the Advanced Placement Program stands in the encouraging position of having won the support of a great many people who want to do something beyond the ordinary in the education of America's youth." Under proper conditions, the student's last year in secondary school can easily prove to be his most valuable and rewarding one. The Advanced Placement Program serves not only as a spur to the good student of senior standing to put forth his maximum efforts, but also as a means for encouraging and improving the articulation between the colleges and our secondary schools.

Mr. Bowles explains that, even after prolonged consideration of the subject, the problem of multiple applications still awaits appropriate solution. It seems, to this reviewer at least, that this is a problem which will remain unsolved until such time as more colleges and universities elect to adopt a policy of notifying their applicants earlier than they now do as to the acceptance, probable acceptance, or rejection of their application. The policy, on the part of some institutions, of not notifying students definitely one way or another until some time late in April or May of their senior year is merely another way of encouraging multiple applications. In many of the discussions of this subject, the colleges bemoan the number of "ghost" applications in their files, and the secondary schools bemoan the time and expense they have been put to in the making out of the duplicate transcripts; but the peace of mind of the individual applicant, whose educational future happens to be the issue at stake, becomes little more than a still small voice that goes unheard in the louder lamentations over the "ghosts."

The test score is but one of several factors which an average admissions office takes into account in the processing of a student's application for admission. There are such related matters as the applicant's rank in class, the pattern of high school studies, the recommendation furnished by the principal or headmaster of the secondary school, the student's selection of courses for the senior year, and the usual intangibles. But of these factors, as Mr. Benno G. Fricke has pointed out in his article, "How Colleges Should Pick Their Students," in the Winter 1958 issue of the *College*

Board Review, the rank in class and the test score are two of the surest criteria for the prediction of success in college. As Mr. Fricke states: "The formula which I believe gives the best assessment of a student's qualifications for college is obtained by giving a weight of one third to tested aptitude and of two thirds to rank in the high school graduating class. Very briefly, the 'college qualification rank' of each applicant would be obtained by multiplying his high school percentile rank by two and adding this to his percentile rank on a scholastic aptitude test (where norms are established on a sample of all high school graduating seniors in the country); this sum divided by three would be the applicant's college qualification rank." In view of evidence such as this, it is obvious that more of our secondary schools will find themselves confronted with the obligation of assigning their students at least an approximate rank in class at the beginning of their seventh semester of residence as well as at the beginning of the eighth. The Scholastic Aptitude Test of the College Board is, as its name implies, a test of one's aptitude for college studies. There is no convincing reason for not encouraging good students to take this test at a date earlier than January or February or March of their senior year in secondary school, and there is no logical reason, other than the factor of the cost involved, for the secondary schools not to assign rank in class to their students at the beginning of their seventh semester. It is just possible, also, that the expense for an earlier ranking of students might be less costly than the expenses which are involved in the preparation of so many duplicate transcripts.

Mr. Bowles discusses the matter of an earlier date for an examination in connection with his remarks relative to the Scholarship Qualifying Test. "Some school officials," he states, "have felt that a spring administration of the SQT would represent an encroachment by the colleges upon the work of the senior secondary school to an extent which would virtually eliminate the importance of the final year." One presumes that in the minds of school officials such as these this same sort of fear would accompany the use by an admissions office of the score made by a good student on the Scholastic Aptitude Test taken in the March or May of the student's junior year. A fear of this sort, however, is not only unfounded; it is also precisely the sort of fear in the minds of some schoolmen which keeps fear alive in the minds of college-bound boys and girls, and thus serves as excellent fuel to the fire of multiple applications.

One wonders whether this problem of multiple applications is, after all, quite so difficult of solution as it currently seems to be. Encouraging straws are in the proverbial wind. Isn't it just possible that the most important ingredient in the ultimate solution of this problem will be found in the mutual willingness on the part of the colleges and universities and on the part of the secondary schools to stop thinking about their own problems and traditional procedures long enough to give some little attention to the

problems of the bright boys and girls whose peace of mind and educational future happen, in the last analysis, to be the primary issues involved?

W. G. B.

College Admissions 5: Planning College Policy for the Critical Decade Ahead. New York: College Entrance Examination Board, 1958. Pp. vii + 116. $3.00.

It is difficult to find a more timely or pertinent topic than the planning of college admission policy for the next ten years. The report of the fifth annual College Board Admissions Colloquium, which contains the papers delivered at that meeting, is a most stimulating point of departure for a college administration to consider in seeking to establish or re-evaluate admissions policy for the critical period ahead.

In outline the publication discusses such areas as the future demand for college graduates, variety in types of colleges, variety in students, what colleges may do concerning prediction of enrollment, finances, faculty, and space utilization. It closes with four case studies centered around four hypothetical institutions of distinctive type and the development of a policy for these four institutions by participants in the colloquium.

In the first paper, Dr. Seymour Harris raises the controversial question as to the possibility that the demand for college graduates may not be as great in the future as has been predicted by most prognosticators. He states that the relative financial gains to college graduates will be less in the future than has been true in the past and that also there will be a decrease in the financial gains to professional persons. The theme of his presentation is essentially that the colleges will need to emphasize the larger values of higher education in the future as opposed to the vocational aspects and that the demand for a college education may not be as great as is being widely predicted.

The second paper, entitled "How Colleges Differ," delivered by Professor Everett C. Hughes, presents as its theme the relationship between appearance and reality and the difference in the relationship of the two among the various educational institutions in the United States. He discusses the student culture and the influence which these concepts exert in and on the institution. He contends that the colleges need to examine quite carefully the student culture existing in their institution and then seek by conscientious effort to create new student images and a new student culture as needed. It appears to this writer that Professor Hughes points up the significant institutional shortcoming of research and study on students and their attitudes.

Appropriately, Dr. Frank Bowles's paper, entitled "Intangibles in Admissions Planning," followed that of Professor Hughes. Dr. Bowles dealt with the problem of the candidate's attitude toward colleges, the factors affecting a student's self-evaluation, and the general representation of a

college. Dr. Bowles concludes on the optimistic note that colleges can do a great deal in the future to eliminate the intangibles and the guess work in admissions work.

As an attendant at the colloquium, it must be said that Professor Paul Engle, the poet, delivered an extremely inspiring and stimulating paper which was a plea for the "overleaping" mind and the expression of fear that colleges favor "balanced" students. He states that we need to look for "minds" and not skills and to be tolerant of divergent thinking.

In a highly technical paper concerning statistics, Dr. John Stecklein discussed three statistical methods of predicting college enrollments. In looking to the future, he states that better predictions and more co-operative planning concerning these problems are needed.

In a dynamic way, President John D. Millett states that "Colleges Must and Can Be More Efficient." He states that a positive attitude is needed, that we can and will find ways of meeting the challenge of more students, and that there must be a willingness to try and use new methods and ways in education. He presents several specific proposals concerning these matters which, in many cases, challenge some traditional points of view on education.

In one of the most practical papers presented at the colloquium, Dean Vernon Alden first presents three major economic changes which he foresees in the immediate years ahead, and against this background he states that each institution must clearly define its educational objectives, and then proceed to seek ways and means of best serving these objectives. He mentions such things as the need to have the student bear most of the cost of his education, and the need for cost reduction in the operation of the institution.

In the closing paper, Dean Edward K. Graham states clearly that the admissions officer or registrar is central to the initiation of planning for the educational institution. He states further that the admissions policy cannot be separated from institutional policy and that each institution should have an admissions policy practice committee closely tied in and related to the central planning for the institution.

The case studies undertaken and presented in the colloquium report are interesting in that each of them will include some aspects related to an educational institution, and the approach in solving these problems will be of interest to all admissions officers.

In summary, the report of the colloquium presents much good food for thought from which any admissions officer or registrar would find himself both concerned and stimulated.

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Robert E. Iffert, *Retention and Withdrawal of College Students.* Bulletin 1958, No. 1, of the Office of Education, U. S. Department of Health, Education, and Welfare. Washington: Government Printing Office, 1958. Pp. xiii + 177. 65¢.

The motivating reason behind the issuance of this excellent monograph is found in the belief that "acuity of hindsight can contribute to the acuity of foresight." Its purpose is to seek out the factors which govern the retention, withdrawal, and transfer of students enrolled in this helter-skelter complexity called the American system of higher education. Highlighted are such items as the individual characteristics of students, their rank in high school class coupled with their placement tests results, their field of major interest, as well as geographical and economic factors which would bear most strongly on the interpretation of their case. This work is not just another repetition of the many surveys that have heretofore been made in this area of contemporary concern. For the first time a comprehensive analysis has been made, emphasizing the impact of these factors in combination. Of especial interest is the fact that the author has focused careful attention on the implications involved and has gone to great depth in investigating all of the submitted data.

Because student withdrawals represent an appalling waste of a high percentage of this nation's brain power, every effort should be made to explore this potential so that it may best be helped to its proper maturity. According to the findings of this survey, only 60 per cent of those students who enter college eventually receive their degree, although fewer than 40 per cent of this number graduate from the place of learning they first chose.

Those who transfer do so mainly because of "general dissatisfaction." This given reason was "highest among students who transferred from technological institutions and second highest among transfers from teachers colleges. . . . Transfers from private church-related institutions expressed less general dissatisfaction than transfers from publicly controlled institutions and far less than was reported by transfers from privately controlled institutions independent of church." Other pertinent reasons include a change in curricular interest, the desire to be (closer to the) home, the financial need (to attend a less costly campus), and low scholastic achievement.

Among male students, military service, economic difficulty, and a loss of interest in further study are the most often given reasons for withdrawing from school. Women students list marriage as the first cause for dropping out. This is followed closely by full-time job opportunities, and personal financial problems. The majority of additional reasons, for both sexes, refer to individual difficulties and deficiencies rather than to a lack of or deficiency in the college of enrollment.

Students rated favorably those services performed by administrative officials and rated most poorly the failure of the schools to provide better opportunities for academic and personal adjustment. In this latter area, students were nearly unanimous in expressing their low opinion of the guidance, counseling, and orientation services of the nation's colleges at the faculty and departmental level. It would seem justifiable, therefore, to begin stimulating instructional staff members to a greater realization of the fact "that students consider classroom teaching to be only a part of their job," and "that social contacts with students are an indispensable part of teaching."

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Ernest V. Hollis and Associates, *Costs of Attending College: A Study of Student Expenditures and Sources of Income.* Bulletin 1957, No. 9, of the Office of Education, U. S. Department of Health, Education, and Welfare. Washington: Government Printing Office, 1957. Pp. v + 91. 45¢.

This convenient and useful report analyzes the educational and living costs of 15,316 students who attended 110 colleges in 41 states during the 1952-53 school year.

The many tables, graphs, and charts carry a great deal of statistical data on the sources of income and expenditures of college students. Any attempt to relate the data to a specific institution for comparative purposes will be fraught with frustration and futility.

The publication should be brought to the attention of those who finance, govern, and administer colleges and universities, as, in the words of the authors, "Financing higher education for a growing number of young men and women in the face of steadily rising costs is becoming a crucial problem in this country."

The survey documents the known fact that parents, relatives, and students provide the major source of money for student expenditure, 86.8 per cent of the total. The remaining 13.2 per cent, according to the report, comes from the following sources: scholarships, 5 per cent; veterans and vocational rehabilitation programs, 5 per cent; loans, 1 per cent; miscellaneous sources, 2.2 per cent.

In an attempt to justify the findings on the costs of attending college in 1952-53 and the present rate of expenditures, the U.S. Office of Education made an interesting comparison of the costs in 1940 and 1957 by using the cost-of-living index of the Bureau of Labor Statistics, which stood at 59.5 in January 1940 and at 117.8 at the beginning of 1957. The cost of

living doubled in this period, and in items such as food, clothing, shelter, and travel, the costs actually were more than doubled. During the period from 1952 to 1957, tuition and fees increased 89 per cent in public colleges and 83 per cent in private colleges. The corrected student expenditures for 1957 could stand at approximately double the cost of the 1940 costs for attending a particular institution.

The authors state that the report is not concerned with such related issues as, "each state should provide suitable programs of higher education that are as free of cost to the individuals as the public school now is," or "students should be charged the total cost of their education directly," or the current practice of dividing educational costs between the student and the general public. However, they freely admit that "their viewpoints" on matters and philosophic assumptions such as these "may have affected to some extent the presentation of the material."

The data in the various tables and graphs are probably much more valuable for discussing basic questions on the general problem than they are for comparative purposes, institution by institution, whether public or private. One could not challenge the facts presented, although some of the details in the tables and graphs, as well as the interpretive material, would not stand severe scrutiny.

The authors undoubtedly did not have in mind a survey that could or should be used by an institution to compare its costs with other institutions. The survey, rather, would appear to have been designed with a view toward assembling a variety of significant educational facts for educational, political, and economic leaders to be able to draw upon when presenting arguments for particular purposes. The basic questions outlined by the authors are as follows:

1. What part of the cost of providing higher education do students pay?
2. What is happening to the ideal of tuition-free, public higher education?
3. Is the basis sound for charging out-of-state fees?
4. Is the movement to amortize college building costs from student fees sound?
5. Is the friendly, co-operative relationship between public and private colleges and universities endangered by the present trend in financing?
6. Should the co-operative "work-study plan" be more widely utilized?
7. Is the public sufficiently aware of the basic issues involved in full utilization of the brain power of the nation?

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Tyrus Hillway, *The American Two-Year College.* New York: Harper & Brothers, 1958. Pp. xi + 258. $3.75.

If myriad admissions and records problems have dulled your educational missionary spirit temporarily, prescribe for yourself soon an hour or two of Tyrus Hillway, writing zestfully on this, his favorite subject.

Hillway has the sort of discontent with things as they are which has often been labeled divine. He feels about American education as most registrars and admissions officers do: it ought to be so much more effective than it is. His discontent is stimulating, however, because he resolves the feeling in 258 pages of practical idealism on how American education should be improved by more and better two-year college institutions.

No adverse criticism of the four-year college appears in this sound and sensible compilation of the know-how for planning and administering the junior college. Hillway takes the positive approach: "It is the special type of opportunity offered by the two-year institution, and not the traditional four-year program, whose extension appears most necessary at the present stage of our educational history."

One of the numerous studies cited points out that one-fourth of our young people who live within 10 miles of a college are attending college the first year after they graduate from a high school. But among the youth who live more than 25 miles from a college, the ratio is one in seven.

As the spokesman for a small army of his colleagues in the junior college field, Hillway gives these rules of thumb for convenient community-serving two-year colleges: the geographical area to be served should have a radius of about 15 to 20 miles, its population should be no less than about 15,000, the high school enrollment in the immediate area should amount to at least 1,000 students, and the minimum enrollment in the college-to-be should not be less than 200 full-time students. The people in that area should want the institution to be there enough to tax themselves to pay for it, and the college-to-be should not duplicate an adequate existing educational service.

Once a survey by the people concerned (with expert assistance) has resulted in the establishment of the two-year community college, the curriculum should be tailored specifically to suit that community; the offerings should include adult education, general education, training for the vocations, training for the semiprofessions, and college preparatory work—according to the needs of the individuals concerned.

To find out the individual needs of the citizens of that community, Hillway counsels all-out guidance efforts. These services would include accurate occupational information, psychological testing, and professional counseling, not only for the prospective students but for the community as a whole.

The admissions officer has an important place in Hillway's hierarchy of servants to the community in its two-year college: "The admissions officer really takes the first important step toward the proper guidance of the student. . . . He often serves the student best by sending him elsewhere."

Since Roy E. Carson, Registrar of Colorado State College, was called upon by faculty colleague Hillway for advice on records and record-keeping, AACRAO is well and favorably represented. The recommendations include every point made by the Transcript Adequacy Committee, in which Mr. Carson has had a working interest from the outset 12 years ago.

To admissions officers in four-year colleges, one of the more thought-provoking passages in this book is that in which Hillway cites a study of 1,177 students transferring to senior colleges after having concluded so-called "terminal" courses in community colleges. Forty-six per cent of them succeeded in obtaining better-than-average grades in the university. Only 16 per cent received grades below the average. "On the basis of this and other evidence," Hillway concludes, "we may safely say that academic success in the upper years of college depends more on ability and willingness to learn than upon the precise nature of the program studied in the lower years."

The word "terminal" is a misnomer, Hillway says. He thinks it should be defined only as "chiefly vocation training for the semiprofessions" which require two years or less of college preparation. But scholar Hillway is too well balanced to advocate the two-year institution for everyone: "For the student who is absolutely certain that he desires four years of college or more, the standard four-year program still would seem to be the correct choice."

Disagreeing with Hillway on some of his generalizations from the literature of the American two-year college won't be difficult, and it may even be illuminating. Surely, however, your discontent with educational things-as-they-are will be sharpened by two hours of thinking alongside this practical philosopher.

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Brian Holmes, *American Criticism of American Education: A British Point of View.* The Boyd H. Bode Memorial Lectures. Columbus: The College of Education, The Ohio State University, 1957. Pp. 93. $1.00.

American Criticism of American Education: A British Point of View

is a learned defense of American education, made many months before the Russians began contaminating the blue empyrean with their sputniks. It is a volume of two lectures: I, "A Theory of Criticism: 'Anti-Intellectualism' and the Public Schools," and II, "Professionalism and the Control of Education." The author, Professor Brian Holmes, is a member of the faculty of the Institute of Education in the University of London. A distinguished scholar in the field of comparative education, Professor Holmes spent the years 1955 and 1956 teaching in this country, on invitation of the Univerity of Illinois. He was invited by The Ohio State University to deliver the eleventh pair of papers in the annual Boyd H. Bode Memorial Lectures. The lectures were given on July 11 and 12, 1956, and were issued in printed form by The College of Education, in Ohio State University, in 1957.

As Mr. Holmes remarks at the outset: "The subject of my papers is vast, extremely interesting, and yet very complex." It is well to keep this introductory warning in mind, because this is not the sort of volume that can be read with an economy of fixations per line.

Mr. Holmes was a visiting scholar at the University of Illinois at the time Mr. Bestor was presenting his vigorous criticism of American education through his *Educational Wastelands* and his more imposing *Restoration of Learning*. One surmises that a principal reason prompting Mr. Holmes to concern his two Bode Memorial Lectures with a defense of American education was his fundamental disagreement with critics of American education such as Bestor, Lynd, and Hutchins. But a perusal of the 76 Footnotes to Lecture I and of the 50 Footnotes to Lecture II will show that Mr. Bestor was the one with whom Mr. Holmes found himself in disagreement most often.

Mr. Holmes contends that one of the great virtues of the American educational system has been its elasticity: its ability to adjust itself appropriately to the pressures and urgencies of changing conditions and new times. "The whole transition in America from the Jeffersonian political ideology to that of Jackson was as important as the struggle for the common school." The westward movements, the steady flow of immigrants from many lands, the movement of population from the rural areas to the cities, and the trend toward specialization, have all been changes in the social and economic life of America which called for accompanying changes in the educational structure. In the search for guidance and direction, early educational statesmen like Horace Mann, Henry Barnard, and W. T. Harris, looked to Europe for inspiration, but they all warned against an uncritical acceptance of foreign practices. "The gradual growth of the free common school which girls and boys alike attended under the political ideology of Jackson, the administrative genius of Mann, and the pressure of events is something for which America should be grateful." And it

follows that we "should be grateful" also for an educational structure which has been able to adjust itself to "the pressure of events" appropriately.

In European countries, on the other hand, tradition dies hard, and the educational structure has remained largely static. As Mr. Holmes states: "The removal from the school system of a selective or dual secondary-school structure, at least for the compulsory attendance age, is the most pressing educational problem, not only in England, but in most European countries today. For many years political theorists, eager to reduce class barriers and improve social cohesion, have argued in favor of the common school. Since the Second World War, proposals for reform in England, France, and Denmark have centered around this issue, but powerful vested interests are strongly opposed to the common school, no doubt because of its fundamental significance. The chief argument used against it is that a common or comprehensive school would inevitably result in the lowering of academic standards." But as Mr. Holmes goes on to show, this specious argument about a "lowering of academic standards" loses its luster upon unimpassioned analysis. "In Europe at least," Mr. Holmes states, "the failure of educational systems to change has been a serious contributory factor in her past and present ills. Fundamentally, the weakness has been due to the failure to invest in the education of the majority rather than in that of an intellectually gifted minority."

One of the most annoying habits of many of those who extol the virtues of European education to the disparagement of the American is that they do not base their comparisons on comparable evidence. And Mr. Holmes, by the way, is not the only one to remind us how dangerously misleading comparisons can be when based on facts which are not comparable. This is a point which has also been made with telling force by Mr. Byron S. Hollinshead, in his article, "Is European Education Better?" in the April 1958 issue of *The Educational Record*. As Mr. Hollinshead there states:

"If observations comparing European and American education are to be useful, then it is of first importance to know something of the scope of what is being compared. If we can assume that the end of the sixteenth year is a good point to compare percentages of young people in secondary school, then we find that at that point approximately 70 per cent of the American age group is in school compared with 10 per cent of the age group in England and France. At college age, about 25 per cent of the American age group is attending compared with 5 to 6 per cent of the European group." And Mr. Hollinshead continues: "In other words, in the United States, some seven times as many of the age group attend high school and at least five times as many attend college as in Europe. Or, to think of it another way, we have almost as many students in the national honor societies in our high schools, and in Phi Beta Kappa, Sigma Xi, and

Phi Kappa Phi in our colleges as Europe has in its entire student bodies. If comparisons are to be made, perhaps it is only the students in our honor groups who should be compared with the total European group."

The American critics of American education have failed to understand the importance of the school as a social institution, which is influenced by, and in turn influences, other institutions. The "economic productivity" of a country, its "occupational mobility, social cohesion, and political stability are affected by the whole educational structure." Mr. Holmes supports this point with statements such as the following:

"The standards maintained in England through examinations have kept the proportion of university students per head of population lower there than anywhere else in Europe. And yet . . . our economy urgently needs a much larger educational middle class, more engineers, more scientists, more technicians, and more professional administrators." Moreover: "The selective schools, the restricted curriculum, the methods of training teachers in Europe have all contributed to the present problems of Western democracies. In particular, the great attention paid to the 'intellectual' education of an *élite,* the originators, rather than to all of those who are called upon to judge, has, in my view, been a source of great weakness. The political danger of creating an *élite* through the operation of a compulsory school system by paying particular attention to the 'gifted' child is that, once the *élite* has been formed, it may be very difficult to break. If the basis of training for its members is rational intellectualism, the possibilities of their coming to agreement on difficult political matters may be remote. This, at least, is one contributory factor in the apparent instability of French parliamentary government. If vocationalism is held in disdain, there is a danger that the scholars will absolve themselves of responsibility by withdrawing from the world of affairs, as happened in Germany in many cases. I have no doubt that if there is truth in the remark that the United States has been left with 'neither a permanent social class, nor a definable intellectual class,' the educational system which has emerged over the last hundred years has helped to bring this about. It is possible that social and intellectual fluidity is one of America's greatest sources of democratic strength."

There are, of course, weaknesses in the American educational structure. But as Mr. Holmes states in this connection: "From my observations, readings, and personal experiences, men and women working in the field of education in America are acutely conscious of its defects and are constantly attempting to solve the many problems it presents more adequately." Mr. Holmes continues: "To dismiss the American achievement by saying that at first, understandably, the emphasis was on quantity, but that now it should be on quality, is to underrate the influence of the school structure on social life. Class structure, occupational mobility, economic prosperity,

political stability, social cohesion and awareness, and the size of the 'cultivated class' are all affected by it. These are the criteria by which American education should be judged." And antithetically, if the American critics of American education would evaluate the effectiveness of the European educational structure in the light of these same criteria, they would see that American education stands out as superior.

W. G. B.

Robert Hendry Mathewson, *A Strategy for American Education.* New York: Harper & Brothers, 1957. Pp. xv + 296. $5.00.

If there is any healthy symptom in regard to the current debates over the aims and accomplishments of American education (as shown in the firecrackers exploded within the educational circles by release of the sputniks), then it is due to the realization that "the need for exploring new avenues in education has long seemed apparent."

Breathing fire into some of his pages, and in the way of a modern Savanarola, Dr. Mathewson takes quite a critical and askance view of the current situation in society and education. On the wings of a psycho-social theory of education, the author approaches his theme from the standpoint of individual and social needs. He develops his "individual-social" theory of education by examining individual development and the nature of the self, social development and the democratic process, interrelations of individual and social development, and implications of theory for education. He then focuses on education for individual and social development and concludes by analyzing "Toward an Educative Society"—the road before us, the social setting, education as a major social force, democracy: the educative society. Basically, this volume is one of the many blueprints for the need to promote functionalism in a free democratic society, with the author proclaiming that such aims are necessary for the projection of education for the survival of man.

Dr. Mathewson is the proponent of his conviction that the democratic process is a means of social progress. Who can argue with him that scholarly competence is important and that "in the realm of values, attitude and trait development, education may find its most influential context"? In a nutshell, his program "is to help the person to know what he is, what he is doing, and why." By utilizing the more recently available knowledge derived from the behavioral sciences (biology, psychology, anthropology, sociology), the author hopes for a "conservative revolution" which would settle once and for all the sniping underground and open warfare between "essentials" and "progressives." We can even forgive Dr. Mathewson for leaning just a little bit too much, in his references, to the "educationalist" trench warfare, and neglecting, in several minor respects, the point of view of the "sociologists of education" (not the educational sociologist!). In

short, this is one of the most provocative books of the recent months, calling our imperative need to revise our thinking because of the imperatives laid down by the growing critical eruptions of our times.

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Margaret Bennett with the collaboration of Molly Lewin, *Getting the Most Out of College*. New York: McGraw-Hill Book Company, Inc., 1957. Pp. ii + 219. Paper $2.75. Cloth $3.95.

The purpose of this book is thus described by the author in the Preface: "One of the vital services of higher education is to help students discover their talents and take full advantage of their opportunities in college to prepare to use their assets in the service of their country and of mankind. This book has been written as an aid in this phase of a college personnel program. It is a response to many requests for material suited to the numerous short-term orientation programs, and is based upon the assumption that group approaches to orientation will be closely integrated with counseling."

The book consists of seven chapters, as follows: "Getting Acquainted," "What Are You Looking For?", "Learning to Learn," "Learning Self Direction," "Learning About Yourself," "Charting a Life Plan," and "Developing a Life Philosophy."

The general point of view is that of the modern personnel psychologist, specializing in guidance of college students. The language of the book is simple, directed to the student who reads the book for his personal benefit, and is not unduly cluttered with educational clichés. While specifically designed as a guide for the orientation of college students to their college life, the basic principles enunciated are of such general applicability that the book may be read with profit by any person approaching adulthood, whether attending college or not.

All colleges make some effort to "orient" their students. Orientation may be brief or more extended, but is generally based on the idea that the student must be oriented to himself and his own capabilities, to the world about him and its opportunities, and to his college and the educational facilities available therein to him. A task of such magnitude can hardly be accomplished in a few days prior to the opening of a school year. Possibly the normal college experience itself, without conscious organization toward this end, may accomplish the type of orientation described. However, an organized orientation program continuing over a longer period of time may be more successful in directing the attention of students toward these particular ends. This volume could be used as a guide in such an orientation course or program.

An excellent discussion and interpretation of the objectives of general liberal education are found in Chapter II. Sound advice is also given in this chapter regarding the importance of good grades: "While you are at college, learning is your business. Doing well at your studies is one way of proving to yourself and to others that, once you are going to do something, you can get the job done. All through life you are going to be judged by your performance. In your college life, a record of good scholarship is your way of demonstrating that you can perform." It is refreshing to find a statement such as this to use against the arguments sometimes heard concerning the importance of student activities.

Chapter III is particularly significant. Miss Bennett first says: "Learning is your number one job while you are at college. Perhaps more important than any body of information you may acquire about any specific subject are the skills you can perfect in learning to learn." She then presents a number of clearly written paragraphs covering the techniques of study, organization of study time, use of the library, and problem-solving procedures.

The remaining chapters develop the general idea of building a life plan to provide for three major fields of interest and activity: work, through vocational pursuits; play, through recreational and avocational life; and love, through family life and home.

Each chapter is followed by a list of supplemental references, and at the end of the book is an elaborate bibliography of motion pictures and film strips that bear generally on the subject at hand. Those visual aids are divided roughly into three categories, "College Life and You," "Study Habits and Skills," and "Your Personality and Philosophy." Unfortunately, a good many of the films in the first category are highly promotional, and may not provide an impartial treatment of the material.

This book should be available in the campus book store, for students to browse through, and possibly buy, at the time they purchase text books. It is printed in a paper cover, which should indicate that the cost would not be excessive.

In many respects, this book is an interesting sequel to *How To Plan for College and What To Do When You Get There,* by John W. McReynolds, which was commented on by this reviewer in an earlier issue of COLLEGE AND UNIVERSITY.

Registrars who have some responsibility for the orientation programs on their own campuses will find this book helpful. Those who are apprehensive about "what the personnel people are up to" should also become acquainted with the material in *Getting the Most Out of College.*

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Lawrence Frank Pisani, *The Italian in America: A Social Study and History.* New York: Exposition Press, 1957. Pp. 293. $3.50.

This history and social study will meet a need for a popular account of the Italian experience in America. To analyze the role of the Italians in American history is indeed a formidable challenge whether one is doing descriptive history or analytical sociology; but to reduce a mass of materials covering millions of Italo-Americans over a period of three hundred years down to a well-organized and nontechnical synthesis, makes the problem of writing all the more difficult, for this is a book aimed at the layman and not the professional historian or sociologist. However, Professor Pisani has risen to the challenge, and has produced within the short space of some three hundred pages a smoothly flowing story, accurate in detail, and often moving in its appeal to the heart.

The story of Italian immigration to America is as old as the nation itself, states the author. It begins with the participation in American affairs early in the fifteenth and sixteenth centuries by Italian navigators, explorers, missionaries, craftsmen, artisans, and entrepreneurs. Italians also contributed to the building of colonial America and to the Revolutionary War effort; however, it wasn't until the beginning of the nineteenth century that we began to get what might properly be called an Italian contribution to American culture. This came as a result of the migration from Italy of professional persons who brought with them not only their skills and their abilities but also their profound love for music, painting, and sculpturing. These immigrants came in discrete numbers as first, but they became America's teachers of art and music, and it was they who brought grand opera from Italy and made it a fundamental part of American culture.

After treating the early beginnings of Italian migration in the first two chapters, the author turns his attention in the remaining seventeen chapters to the hundreds of thousands of Italians who came to America at the turn of the century as part of the mass migration wave which spread all over southern and eastern Europe. These Italian immigrants came from all over Italy, and they represented every profession and social class, but the bulk of them were from the south, and, in the main, they were skilled and unskilled laborers and peasant farmers.

What created this mass exodus from Italy? What made these workers and peasants leave the family, the land, and the village they loved so much? Professor Pisani handles this phase of the Italian story with a deep understanding of Italian history. The depiction of life in Italy at the time of the mass migration movement is superb, and this old-world background is related in a very clear manner to the problems of adjustment upon arrival in America. These chapters and those dealing with the work situation and

with life in the Italian-American community are the finest in the book, for they are not only written with good sociological perception, but with fine ethnic sensitivity as well.

The remaining chapters, especially those concerned with long lists of Italian-Americans who have succeeded in such fields as industry, law, medicine, education, politics, business, and entertainment, are not basically relevant to the social study of a minority group. Unfortunately, the author's style here is less empathic and sociological and becomes more journalistic. While these lists of successful persons are informative and interesting, the basic question which the author should have raised involves the problem of the influence of Italian cultural norms upon behavior. To what extent do Italian norms, traditions, expectations, and values affect the behavior of the Italian immigrant in the foreign setting? This question the author fails to take up.

Whatever the minor weaknesses, this book should be well received, particularly by Americans of Italian descent who want to know more about their ethnic origins. And although it is a nontechnical account, it should also be useful to all those social scientists who from time to time have need for a handy reference work on Italians in America.

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Albert H. Marckwardt, *American English*. New York: Oxford University Press, 1958. Pp. ix + 194. $4.50.

From earliest times it has been customary to think of the American language as a bastard offspring of the Mother Tongue. Englishmen recognized that there must be some kind of maternal link between the language they used and the one used over here; they concluded that American was the unfortunate result of rape perpetrated by Greasers, Buccaneers, Sachems, and Senegambians. Most Americans became queasy when they thought of their foundling language growing up in the wilderness of a new continent, far, far removed from Oxford and Cambridge, and even quite remote from Harvard. It was not until the twentieth century that a host of good scholars established American as a sturdy, legitimate heir of the English branch of Indo-European.

Though much work has been done on the American language, a large synthesis has yet to appear. The first studies had to do with vocabulary accruals and pronunciation variations. Grammatical developments have been investigated, and regional dialects are now being recorded in detail. The time is almost ripe for a compendium of the American language. The chances are that this work is going to emanate from, or at least be

greatly indebted to, the scholarship of the so-called Michigan school, home of Hans Kurath, Charles Fries, and Albert Marckwardt.

American English, the latest book by Marckwardt, makes no claim to be the great synthesis; indeed, no volume of 194 pages could accomplish such a task. It is, rather, a brief, thoroughly reliable account of what has happened to English since its establishment here in the seventeenth century. *American English* parallels the *Growth and Structure of the English Language,* that admirable account of English written by Otto Jespersen in 1930 and now available as an Anchor Book (95 cents).

Jespersen uncovered the various linguistic strata, from recent borrowings, through the accumulations of Greek, Latin, French, and Scandinavian, eventually reaching Anglo-Saxon at rock-bottom. Marckwardt analyzes the contents of our great melting-pot, separating the ingredients of Colonial times, the basic stock of imported English; to which were added Dutch and German Braten, French piquants, Indian herbs, and Spanish ollas. Both books end with optimistic chapters on the future of the language we share with the British.

Both writers have progressive views on language: they examine languages as organisms rather than fossils. Both are trained linguists who interpret the data of language. In this they differ from Henry Mencken, author of *The American Language* in three large volumes. Mencken collected a stupendous amount of valuable data; he presented it with the hoopla and shock of a barker telling of the naughty hootchy-kootchy to be seen in the side-show. At times he was totally unable to appreciate the fundamental issues, witness his lively exposé of the Simplified Spelling Movement, in which he revealed that he knew little or nothing about phonetics. Though often perverse, reactionary, and deficient in linguistic insight, Mencken wrote a lively history of the American language.

The only cavil about Marckwardt's *American English* is its unnecessarily cautious style. Too many of the sentences are dulled by over-circumspect qualification: "to some degree," "to some extent," "not unlikely that," etc. Too few of the thoughts are sharpened by figurative language.

It is, withal, a good companion volume to Jespersen's *Growth and Structure.*

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William Oliver Martin, *The Order and Integration of Knowledge.* Ann Arbor: The University of Michigan Press, 1957. Pp. viii + 355. $6.50.

Essentially a treatise on the basic types of knowledge, their components,

contexts, limitations, and interrelationships, Professor Martin's book deals in a succinct and scholarly manner with the nature of evidence and "the foundations of responsible belief and utterance." The author deplores the disorder of knowledge so prevalent in higher education—more in the arts and sciences than in technology and medicine—and in particular the alarming trend of this disorderliness to assume respectability through "the 'method of consensus' which, in abstraction from knowledge about kinds of knowledge, is simply a power technique masking under the guise of democracy."

In the preface, the approach is described as systematic rather than historical and the author states with candor that he has not discovered the order of knowledge but has attempted to organize the discoveries of others or shed new light on old problems. Acknowledgment is also given to John Wild and Henry B. Veatch, whose impact upon the shaping of the general theory dealt with in the volume is unmistakably recognized by the serious student of philosophy. To the casual reader who misses the traditionally-held views so meticulously expounded in the first hundred pages, the rest of the treatise will have little meaning. Especially illuminating, so far as an understanding of the book is concerned, is his Scholastic interpretations of experimental science and cosmology—a return to the God-as-sole-creator theory resulting in a unique bolstering of the Scholastic-Realist hypothesis of knowledge emerging from the higher form of being.

Dr. Martin states, and with good reason, that since metaphysics is understandable to few people it is rejected as untenable, even though science in its nth degree cannot account for the origin of matter except by going into the realm of the metaphysical. This, he maintains, is "the fatal difficulty of Positivism." (The fact that names are given to metaphysical activities does not make those activities empirical ones *per se.*)

Early in the book, emphasis is placed on the importance of distinguishing between relative and absolute values (relative being empirical, i.e. transient) and the difference between knowing and postulating. Postulation can never be knowing, for when one knows it is no longer necessary to postulate. A discussion on this is prefatory to a paragraph which is intended to convey the key to real Truth and the unique role of metaphysics as being not only one of the types of knowledge to be ordered, but also "the kind of knowledge in terms of which the order is to be understood." The reviewer infers that the pages which follow are essentially an explication of this point of view. With greater directness further in the treatise, the statement is made that "the whole of this volume is a repudiation of the notion that knowing is creating."

Chapter four dealing with history suggests that the author is either unfamiliar with the rather convincing arguments for the new historicism (which is unlikely) or else chooses to ignore them. Subsequent chapters

on experimental science, mathematics, and natural science are in parts labored and in other parts brilliant. The sympathetic reader will laud Dr. Martin's book as a classic in contemporary philosophical literature. Even those who suspect the author of falling into the "nothing but" type of reasoning, which some believe to be too common among Scholastics, may well acknowledge Dr. Martin's depth of scholarship and command of expressive language.

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Jesse B. Sears and Adin D. Henderson, *Cubberley of Stanford: And His Contribution to American Education.* Stanford, California: Stanford University Press, 1957. Pp. xii + 301. $5.75.

Here is an interesting and well-written book about one of the pioneers in American education, Dr. Ellwood Patterson Cubberley. It is a history of a man who made educational history and who wrote very successfully about the history of education. When one starts to read this book, he finds it so interesting that he wants to continue with minimum interruptions to the end.

The first four chapters, Part One, deal with Dr. Cubberley's ancestry and early years, education in college, first teaching experience, marriage, Presidency at Vincennes College, and his Superintendency at San Diego. These chapters present an admirable picture of Cubberley's youth and education and of his early professional experiences which were challenging and rewarding but not without innumerable difficulties to be met and overcome. Practical experience and diligent study provided the basis, during this period, for the rapid growth and development of an ever-expanding concept of the rightful role of public education in the United States.

Dr. Cubberley's deep interest in people, his devotion to education, his capacity for hard work, his skill in the analysis of problems and in problem solving are described in words which reveal an intimate and warm acquaintanceship with him as well as a strong admiration for him.

The next six chapters, Part Two, present the story of Cubberley's illustrious career at Stanford University, his many contributions to the history of education, to school administration, to local, state, and national studies and surveys, and his work as an editor. As one who used two of Dr. Cubberley's books while he was teaching the history of American education, *Public Education in the United States* as a text and *Readings in Public Education in the United States* as a companion reference, and as one who has read many of Dr. Cubberley's other writings, the reviewer believes these chapters are interesting, challenging, and delightfully restrained.

The senior author did not permit his long association with Dr. Cubberley to carry him to excessive and exaggerated statements.

"One can say that Cubberley wrote history from an intense liking for it. He held a strong conviction of its worth as a means of gaining understanding and enjoyment from the past, as a basis for developing the insights necessary to an understanding of the present, and as being essential to an intelligent look into the future. . . . He wrote, also, from a conviction that our civilization is not only a changing but a growing one, that this principle of growth is inherent in man, that growth is evolutionary in character, and that by use of his talents man can make the principle apply to society as a whole or to an institution." This quotation, which is found on page 124, sets forth in a clear way Dr. Cubberley's approach to the writing of educational history.

Dr. Cubberley's unique ability to locate the facts and forces of educational history that influenced in a marked manner the development of our peculiarly American system and to relate these to significant social forces and movements of a national character put hand in hand the growth of public education and the growth of the United States. This was, of course, his aim, and it stemmed from a strong conviction that the strength of our society and form of government would rise in direct proportion to the quantity and quality of the education of the nation's citizens.

Dr. Cubberley's many contributions to school administration, through practice and publications, were timely and visionary and, at the same time, they were practical. "He believed that administration must remain routine and inefficient until scientific study and writing had brought it up to the level of professional work. . . . He would search with enthusiasm for principles and facts to apply as the basis for new policies and with equal enthusiasm at formulating policies and at planning for their execution."

Dr. Cubberley's contributions to school surveys, editorial work, and other related projects were legion and extremely significant. His versatility in dealing effectively with so many phases of education are clearly set forth in this volume. In fact, and even though the reader may have a reasonably accurate awareness of the scope of Cubberley's undertakings, he cannot avoid amazement at their variety and extent when they are described and analyzed together in one volume.

The last two chapters, Part Three, describe Dr. Cubberley's activities following retirement and his financial and philanthropic ventures. His financial successes and his investments of his funds in the development of Stanford are portrayed in an unusually lucid manner.

Throughout the book, numerous references reveal the warm partnership between Mr. and Mrs. Cubberley and her many contributions to his work and to the institutions and communities of which they were a part.

The Preface states, "Professor, author, editor, historian, administrator, consultant, financier, philanthropist, and delightful person!" Impossible? Read the book, and you will agree that it was not impossible and that the words were well chosen. This book should enjoy a wide audience, both professional and lay.

CHARLES W. SANFORD
Dean of Admissions and Records
University of Illinois, Urbana

Reported to Us

M. M. C.

Noel Hubbard, formerly Registrar and Director of Admissions at the Missouri School of Mines and Metallurgy, was promoted to Assistant Dean, effective July 1, 1958. He has been succeeded as Registrar and Director of Admissions by Paul E. Ponder, formerly Assistant Registrar at the Missouri School of Mines and Metallurgy.

David Mirsky, Assistant Registrar at Yeshiva University, has been appointed Director of Admissions at that institution. Professor Mirsky, who also is an assistant professor of English and Hebrew literature, was named assistant registrar in 1955. In his new post, he will retain his teaching assignments.

On August 18, 1958, Henry F. Rossi became Registrar at St. John's University. This is a new position at St. John's created to unify all functions. Prior to going to St. John's, Mr. Rossi had been at New York University for 23 years.

William J. VanCleve, who has been Assistant for Supervisor Relations at the Educational Testing Service at Princeton, N.J., became Registrar at the University of Chicago in July 1958.

Leonard G. Nystrom has been named Director of Admissions, a new position which has been created at Southern Methodist University. Succeeding him as Registrar is J. Douglas Conner, who has been Assistant Registrar for a number of years. The Registrar will continue to be responsible to the Provost of the University but will be represented through the Director of Admissions.

On September 1, 1958, Elizabeth A. Boyajian succeeded Mrs. Helen J. Tavenner as Registrar at Drexel Institute of Technology. Miss Boyajian has been employed in the registrar's office since 1945 and was Assistant Registrar prior to being named Registrar.

Mrs. Tavenner, who has retired, was an assistant in the registrar's office from 1916 to 1919. She was secretary to the Registrar from 1919 until 1941, when she was appointed Registrar.

Usually after admission has been granted and the incoming freshman has accepted a place, the office of the registrar has the responsibility of processing many forms, regardless of the system he uses, to provide essen-

tial information to a number of offices and services. Of great importance is the accuracy with which the name, home address, and parents' names are gathered and disseminated. Checking and rechecking with source data, such as the application for admission, secondary school record, and correspondence does not insure complete information or even accuracy.

For many details, addressograph plates for the student and the parents are essential. Bucknell University reports the use of proof cards of these two plates which are mailed to the new student for approval, or the making of any necessary corrections in names or addresses.

The approval of these plates by the primary source adds much to the accuracy of records in many departments. Probably most of the errors which have been known to follow a student until he is checked at graduation will be eliminated.

A future expansion of 40 per cent in the student body of Sarah Lawrence College was announced recently by the college's board of trustees in a report which called for the continuation of educational experiment as a central aim of the institution.

The thirty-year-old experimental college, whose individually planned curriculum replaces the traditional system of required courses, lectures, examinations, and grades, will consider the following new areas for future development in educational planning: the extension of the college year into the summer months, an extended program of foreign study, the preparation of teachers through the curriculum of liberal arts, experiments with a variety of class sizes, and co-ordinate classes with men from nearby colleges.

Central to the character of the college is the personal relationship between students and teachers in a close-knit community life, and the students' opportunity for independent study centered in seminar and discussion groups, using original source materials and direct experience with the creative arts and scientific experiment.

At the present time, 95 per cent of all classes are of 15 students or less in size, with a ratio of one teacher to every 6.8 students and a "don" or faculty tutor for every student. The system will be continued and expanded in new directions with the increased enrollment, with a greater variety in course offerings, and in class sizes and methods.

Students at the University of Massachusetts can now complete their four-year program in three years. "Some students will accelerate their program, some will not. It will be easy to graduate in three years from the College of Arts and Sciences and from the School of Business Administration, not so easy from the School of Engineering," according to President J. Paul Mather.

To initiate this new program freshmen will be admitted for the first time in the history of the University to its summer sessions. The summer programs mean the year-round use of the university campus buildings, staff, and faculty. Under the new system there will be two five-week sessions for teachers, liberal arts graduates, and incoming freshmen. The freshmen in certain curricula will be able to complete a college education in three calendar years.

The new full-year attendance plan went into effect in mid-June of 1958, although the first full-size freshman class will not enter until 1959, since it will take two years for the program to get in full swing. The system will open up an optional three-semester program or a more flexible four-quarter system offering a greater variety of courses. "In 1959 the University will be operated on a full twelve-month schedule, and at least one entering class will start in June of that year. This class will be accepted only on the basis of attending the university all summer," according to President Mather.

A conference to aid state and local school systems to consider means of using psychologists in schools was held at Asheville, N.C., in June, sponsored by the Southern Regional Education Board under a grant from the National Institute of Mental Health. Participants in the conference were chief state school officers, heads of university departments of psychology and education, and representatives from large and small city, county, and state school systems. They heard a report from Dr. Louis Cohen of Duke University's Department of Psychology and Psychiatry, who recently completed a series of interviews with state and local school officials throughout the South to determine the extent and nature of the use of school psychologists in the region.

Freshmen and sophomores attending The University of Michigan this fall will be among the first underclass students in the country offered a chance to study Asia on the same basis that Europe has traditionally been studied. Although such a course has been offered to postgraduate students, The University of Michigan course is unique in the entire country for underclassmen at the introductory level. The Asian course is backed by a grant of nearly $27,000 from the Carnegie Corporation of New York.

The two-semester sequence, named Asia I and II, may be elected by 60 students. The entire class will meet for two lectures weekly, being divided into three sections of 20 students each for recitation periods. Several UM professors, experts in history, philosophy, fine arts, geography, economics, anthropology, political science, Near and Far Eastern languages and literature, will give the lectures. One or more student assistants will be appointed to gather materials and help in course preparation. No textbooks for such a course exist at this time. Although the assembling of

materials has been rather difficult for some areas, particularly Communist China, it has been achieved through European sources.

The first semester is planned as an introduction to the study of civilizations, examination of East-West problems, and survey of basic features of Asian societies. During the second semester, students will study problems of culture contact and change, and delve more deeply into the literature of East-West problems and modern history of Asia and the West today.

The fiftieth anniversary of the beginning in the United States of professional education for social work was celebrated by the School of Social Service Administration of the University of Chicago on May 13. The first to be incorporated into a university and to give the Ph.D. degree, the School of Social Service Administration became a professional school of the University of Chicago in 1920.

At the fiftieth anniversary dinner, two grants totaling $330,000 toward a $500,000 fund for the School were announced. The Chicago Community Trust has made a grant of $300,000 to endow the George Herbert Jones Professorship in the School of Social Service Administration. A Wieboldt Foundation grant of $30,000 toward establishing an $84,000 program in juvenile delinquency and corrections also was announced. Under terms of the Wieboldt grant, the University must raise $54,000 to complete the research fund. A committee will also undertake to raise over the next three years a total of $170,000, including the $54,000, for support of activities of the school.

A new division in the College of Communication Arts at Michigan State University includes the existing School of Journalism and two new departments, advertising and radio-television-film. Advertising was formerly taught as an area in journalism and radio-television-film was an area in the speech department. Students still will specialize in one area but will also be made aware of the importance of other media.

The new Division of Mass Communications will have about 450 major students and will be housed in the present Journalism Building along with the Communications Research Center. The Division will offer bachelor's and master's degrees and, through the new Ph.D. in Communication Arts, the doctoral degree. The new doctoral program is designed to produce experts on "public communication" and calls for as much course work outside Communication Arts as within the parent college.

The program is designed for individuals with experience in professional communications and a scholarly interest in communications problems. In addition to foreign language and dissertation requirements the program

calls for work in each of three broad fields: communication theory and process, mass communications, and communications research methods.

The board of trustees at Ohio State University has authorized the establishment of a third branch campus to be located at Mansfield. The first-year course offerings will be open to freshmen only, with offerings later to be expanded to include basic courses required during the first two years of a standard college program. At each of the three branch campuses at Marion, Newark, and Mansfield classes are held in the high school building, with students paying fees of $10.00 per quarter hour. The only other expense to the student is the cost of his books.

According to the *College and University Bulletin* of the Association for Higher Education, "Private contributions to American colleges and universities have risen sharply in the past two years. A total of nearly $833 million in gifts and grants in the last academic year was reported by 910 institutions of higher education as contrasted with $336 million reported by 738 institutions in 1955-56, according to a joint survey conducted by the American Alumni Council, the American College Public Relations Association, and the Council for Financial Aid to Education, Inc.

An exact comparison of just 553 of the Institutions taking part in both the 1957 and 1955 surveys indicates a 62 per cent increase in giving over the past two years. And, if the special grants of the Ford Foundation for faculty salary endowment are included, the increase is 102 per cent.

While all sources have markedly increased their support of higher education since 1955, general welfare foundations headed the list of contributors. The contributions of foundations more than tripled those of alumni, which gave substantially more than religious denominations, which in turn gave slightly more than business corporations. The highest gain in the 2-year period, including the large Ford Foundation grants, was in contributions for faculty-staff salaries (506 per cent).

According to a report of the Institute of International Education, the United States attracted more foreign students to its schools in 1957-58 than ever before in its history. This country continued to lead the free world in the education of foreign persons, with 43,391 students and scholars coming to study in 1801 American schools from 145 counrties—some as remote as Basutoland and the Fiji Islands.

Three significant characteristics of foreign students in the United States are revealed in the Institute's *Open Doors,* an annual statistical report on educational exchange: (1) the typical foreign student in the United States is a Far Easterner majoring in engineering; (2) he is most likely here on his own funds, not because of a scholarship; and (3) in one out of three

cases, he is interested, especially if he is an engineer, in employment after graduation with the overseas branch of a U.S. corporation. The statistical "he," it might be added, is also apt to be an actual "he," with men students still outnumbering women more than three to one. The only country to send more women than men was the Philippines.

The already large number of American students going abroad for study rose further in the period surveyed by the report. They numbered 12,845 in 52 countries with a tendency to concentrate heavily in the West. Fifty-eight per cent, a record number, went to Europe, 20 per cent studied in Latin America and 13 per cent went to Canada. (Figures for American students abroad were for the academic year 1956-57, because of the greater time required in obtaining statistics from overseas universities.)

The Far East continued this year to be the area which sent the largest number of foreign students to the United States—33 per cent of the total. Latin America was again second, with 21 per cent. The only country to top the large Far Eastern delegations was neighboring Canada, which continued to be the single country with the largest number of students here.

More foreign students, 10,111 (23 per cent) were enrolled in courses in engineering than in any other field. The next largest group was in the humanities. Far and Middle Easterners and Latin Americans, striving for their countries' economic development, were those concentrating most heavily in engineering. Africans, newly coming into political independence, tended more to the social sciences. Europeans and Canadians swelled the numbers of those in the humanities.

Statistics on sources of financial support showed that again this year the largest single groups of students—42.2 per cent—were studying on their own funds. The next largest group—29.4 per cent—was aided by private organizations. Almost 5 per cent were subsidized mainly by the U. S. Government, with another 2 per cent aided by a combination of U. S. Government and private funds. Although grants from the United States Government and private American foundations and universities do play an important part in attracting foreign students to our shores, the large number of self-supporting scholars seems to indicate that the caliber of our schools is an equal attraction.

A new statistic added to the IIE survey this year is of particular interest to American business. Asked for the first time if they would be interested in employment after graduation with an overseas branch of a U. S. corporation, more than 35 per cent of foreign students answered in the affirmative. Almost half of these were engineering students, and approximately one-third were from the Far East.

Every state in the union, as well as the District of Columbia, Alaska, Hawaii, and Puerto Rico played host to foreign students, IIE reported. California had the largest number, with New York a close second. These

two states accounted for more than one quarter of the foreign student population. Three more states—Michigan, Massachusetts and Illinois—each had more than 2,500. The University of California was outstanding in not only having the largest foreign student population, but the greatest number of foreign faculty members and the largest number of its own faculty on foreign assignment.

Total figures on faculty exchanges continued to grow as did the number of foreign physicians training in U. S. Hospitals. The most notable statistic in the latter category was the sharp rise in the number of women physicians coming here, most of them from the Far East.

The Ford Foundation has made 125 fellowship awards in business administration and economics to graduate students and professors at 41 universities for the 1958-59 academic year. The fellowships are part of a Foundation program to increase the number of university teachers and to encourage research on significant problems in these fields.

The awards fall into three categories: predoctoral fellowships, dissertation fellowships, and faculty research fellowships.

The predoctoral fellowships are intended to encourage outstanding holders of the degree of Master of Business Administration to extend their training to doctoral work in preparation for teaching and research careers. These fellowships are renewable for a second year upon demonstration of superior performance. Thirty-two first-year and 23 second-year predoctoral fellowships were awarded.

Dissertation fellowships are designed for candidates for doctoral degrees in economics and business administration who have completed all requirements except the thesis. The awards will enable these students, whose work might otherwise be delayed for financial reasons, to devote full time during the academic year to the completion of their doctoral dissertations. There were 36 recipients of dissertation fellowships.

Faculty research fellowships release faculty members from regular academic duties to carry on research on important economic and business problems of their own selection. These fellowships went to 34 scholars on university faculties.

The Foundation has made an appropriation of $750,000 to continue the program for the academic year 1959-60. Candidates for fellowships in all categories must be nominated by their universities. Further information about these fellowships may be obtained from appropriate university officials.

Experiments in the more effective use of teachers in public schools throughout the United States will be supported by grants announced by the Ford Foundation. They are:

A grant of $112,000 to Goddard College, Plainfield, Vermont, for an experiment by several colleges and school systems in Maine and Vermont in the use of college students as classroom assistants and in improvement of science and mathematics teaching in rural areas of Vermont.

A grant of $350,000 to New York University to help finance an experimental reorganization of classwork in the schools of two New York City suburbs, Long Beach and Ossining.

A grant of $350,000 to the National Association of Secondary-School Principals for experiments in various school systems in California, Colorado, Illinois, Indiana, Massachusetts, Minnesota, Texas, and Utah.

A grant of $140,000 to Yale University for recruitment and preparation of liberal-arts students for public school teaching through a new Master of Arts in Teaching program.

A grant of $65,200 to Miami University, Oxford, Ohio, for advanced course work for superior high school students through the use of television.

These grants and others in the field of education announced by the Foundation for the third quarter of its fiscal year total $1,217,200.

Among other grants in the field of education were:

Association of American Colleges: $25,000, in partial support of the summer conference program of the Commission on Liberal Education.

International Association of Universities: $25,000, for a tour of several American and Canadian colleges and universities by members of the Administrative Board of the Association.

Released Time of Faculty for Educational Television: grants of $37,500 each to Boston College, the University of Minnesota, the College of St. Scholastica, and Tulane University to enable members of their faculties to be released from teaching duties to participate in educational-television programs.

A grant of $1,249,000 to help Pakistan develop its secondary-school system and meet its demand for trained teachers has been made by the Ford Foundation. The project includes setting up 40 demonstration schools and two teachers' extension training centers, and supporting them with advisers, research, and training facilities from the University of Chicago.

The grant was one of several made to strengthen higher and secondary education in four Asian countries. Others included:

Burma: $477,075, to strengthen science teaching at University College, Mandalay, with assistance from the University of Florida.

Nepal: $226,000, to support a Rural Higher Institute to train personnel for agricultural and community development.

Indonesia: $639,500, to enable the Research Foundation of the State University of New York to provide a field advisory team, books, and instructional and laboratory equipment for training colleges for secondary-school teachers.

The grants were part of a series totalling $5,525,065 announced by the Foundation under its Overseas Development program and programs to advance international studies and cultural exchange.

Also in education, the Foundation gave $450,000 to strengthen Italy's first graduate school of public administration at the University of Bologna, one of Europe's oldest centers of higher learning.

Regional Associations

NEBRASKA ACRAO

Kearney State College played host to the semi-annual meeting of the Nebraska Association of Collegiate Registrars and Admissions Officers on October 18, 1957.

The program included a panel which discussed a Code of Ethics for Admission Counselors, under the leadership of Don Payne of Midland College. In the afternoon, another panel under the direction of Loyd C. Oleson of Doane College, discussed the general question of how admission officers might be relieved of pressures when they must deny a student admission. There was also discussion of the new certification laws in Nebraska.

At the business meeting it was decided that the past president of the Association should be the official delegate to the Council of Regional Associations. It was agreed to formulate plans to finance the delegate to the national meeting of AACRAO.

The new officers for the coming year are:

President: Floyd Hoover, University of Nebraska

Vice-President: Donald Payne, Midland College

Secretary-Treasurer: Genevieve Price, University of Omaha

NEW ENGLAND ACRAO

Brandeis University in Waltham, Massachusetts, was the setting of the Tenth Annual Meeting of the New England Association of Collegiate Registrars and Admissions Officers on November 15 and 16, 1957. 140 members and 12 guests attended the meeting.

Two workshops were held on Friday afternoon, November 15. The first dealt with "The Registrar: His Scope and Responsibilities" under the chairmanship of Donn Hayes of Boston University. The second dealt with "Admissions—The Perennial Problems" under the chairmanship of Gilbert Garland of Northeastern University.

The speaker at the dinner session on Friday evening was Dr. J. Wendell Yeo, Vice-President of Boston University. At the business session on Saturday morning, Dr. Frank Bowles, President of the College Entrance Examination Board, addressed the group on the topic "Hysteria in the Colleges."

On Saturday morning a workshop was held on "Foreign Students" under the direction of Helen B. Johnson, Registrar, Bowdoin College. A second workshop was conducted by Rev. Royal Gardner, President of Providence College, on the topic "Advanced Placement."

The following officers were elected for 1957-58:

President: Miss Helen B. Johnson, Bowdoin College
Vice-President: Franklin O. Fingles, University of Connecticut
Treasurer: Rev. Mother L. Santen, Newton College of Sacred Heart (for two years)
(Mrs. Florence Egan, Teachers College of Connecticut, will serve her second year as Secretary.)

OKLAHOMA ACRAO

The Oklahoma Association of Collegiate Registrars and Admissions Officers held its 1958 annual meeting at Northeastern State College in Tahlequah on March 14, 1958. The meeting was directed by Ruth Arnold, President of the Oklahoma ACRAO.

There was discussion of the progress of Oklahoma in the consideration of forming a regional association with neighboring states. This matter is to receive further study before action will be taken.

The program included a round-table discussion on *Admissions* led by Harvey Faust, Registrar, East Central State College. Among other things, it was clear that there is a trend toward selective admissions in one form or another by most of the colleges. Sam Pool, Registrar, Southeastern State College, conducted a round-table discussion on *Records*.

During the luncheon Dr. Harrell E. Garrison, President, Northeastern State College, addressed the meeting and emphasized the importance of the role of the registrar in any college administrative organization. The afternoon meeting was devoted to a discussion of enrollment trends and current problems emerging from these trends.

The following officers were elected for 1958-1959:

President: Noble Bryan, Northeastern State College, Tahlequah
Vice-President: A. B. Childress, Connors State Agricultural College, Warner
Secretary: Aurice Huguley, Northwestern State College, Alva

PACIFIC COAST ACRAO

The Pacific Coast Association of Collegiate Registrars and Admissions Officers held its 31st annual conference in San Francisco on November 10-13, 1957, under the leadership of its president, Louis L. Windmiller.

A clinic for new members was held on Sunday afternoon, November 10, and a reception was conducted Sunday evening. A tour of San Francisco was made on Monday morning. The first general session was held on Monday afternoon, which featured an address, "Objectives of a Liberal Education" by Dr. Philip H. Rhinelander of Stanford University. AACRAO president Roy Armstrong brought greetings from the national Association.

On Tuesday the general session heard an address on Research Problems

in Higher Education by Dr. Thomas R. McConnell of the University of California. A part of the morning was devoted to a session on foreign credentials led by Dr. Herman A. Spindt.

The Tuesday afternoon session included three workshops on registration, retention, and research. The banquet session that evening heard Professor John E. Arnold of Stanford University present "A Look at Creativity." The general session on Wednesday morning presented a panel on legal questions and a Question Box.

The 1958 conference of the Pacific Coast ACRAO will be held at Long Beach, California.

The new officers for 1957-1958 are:

President: Edgar L. Lazier, University of California, Los Angeles
Vice-President I: David P. Arata, University of Santa Clara
Vice-President II: C. W. Quinley, Jr., Eastern Washington College of Education, Cheney
Secretary: Genevieve Humiston, Cerritos Junior College, Norwalk, California
Treasurer: David L. Windsor, University of Arizona, Tucson

FROM THE 44TH ANNUAL MEETING—PANEL DISCUSSION

Trends in Testing

(This report was unavoidably delayed beyond the deadline for the Summer issue.)

By way of introducing the topic, the section chairman reviewed the early history and development of testing for college admission purposes. His reference to Binet's "concocting a device for self-destruction which was to rank with poison gas and the A-bomb" was received appreciatively, along with his allusion to "the hard-boiled eggheads who kept their sunny side up and developed for colleges the first S.A.T. in the 1920's." The vacillation between concentration on achievement, then on aptitude, extending as far back as 1874, is not yet a settled matter. "First we emphasized achievement, then aptitude. We now seem to be concerned with achievement again. Why? Because we expect an avalanche of students to seek college admission—and admission will be the reward, so we move to achievement tests for the basis of selection."

He felt that one event might change this trend, and he concluded on a theme suggestive of hopeful prophecy: "If our colleges—and the public—will accept that all colleges are not the same and should not be the same, and that all people cannot benefit equally in any college program, we shall then have a demand for the development of tests to define and classify

recognizable talent in addition to the more familiar measurement of verbal and quantitative factors."

Certain trends such as differential testing and some of the difficulties and problems to be expected came under scrutiny. Illustrative of this is the University of Washington experiment to predict success in thirty-three departments. Advanced placement may represent a trend toward identifying the gifted, and reference was made to the grant to the North Central Association for a project to investigate techniques for the guidance and motivation of superior and talented secondary school students. Extending this theme, and admitting the growing recognition of achievement's important role, Mr. Grose pointed out the significance of certain non-intellective factors such as motivation, since it is well known that even top-notch students frequently drop out because of lack of incentive. He made reference to a new study by Robert Pace and George Stern of Syracuse University which concentrates on the dimensions of personality and attempts to "rate" colleges as to the type of personality a school attracts or seems to require. Although not yet released, this study may represent some frontier thinking and experimentation which is both valuable and timely.

Correlative to this, the statement was made that "no test nor test publisher should make a claim as to what a test will do for a particular college." Several nationally known testing agencies now enjoying a growth in service and prestige were mentioned, along with the work of certain large universities in developing their own tests, which is a trend in contrast to the practice of many colleges to contract with private testing organizations for service. State-wide testing programs were mentioned by delegates from Florida, Illinois, Indiana, Kentucky, and Minnesota.

There was a plea to eliminate the multiplicity of tests and settle on a few which, through careful selection and a period of experimentation, will have proved useful and appropriate to the objectives agreed upon in a particular area or system. A healthy trend appears in "taking tests from under the bushel baskets" and concentrating more effort on useful interpretation and follow-up through discussion of actual test results with the testees themselves.

Copies were distributed of *Report Number Three* of the Joint Committee of the School-College Relations Committees of AACRAO and the National Association of Secondary-School Principals. There was unanimous agreement that there is need for more articulation between secondary schools and colleges—not solely for the purpose of implementing possible solutions to the present "testing dilemma," although progress in that direction might well be expected. The urgency for achieving this closer working relationship was emphasized and arguments advanced in favor of both

national and regional associations' taking steps to investigate the means for bringing key secondary administrators into the orbit of the professional groups of college registrars and admissions officers.

PANEL MEMBERS

FREDERICK J. FRANK, *Chairman,* Washington and Jefferson College
DONN W. HAYES, *Recorder,* Boston University
H. DEAN BURDICK, Colorado School of Mines
CLAUDE SIMPSON, State College of Washington
KENNETH N. VICKERY, Clemson College
GAYLE WILSON, University of Michigan

AACRAO—Treasurer's Report—Fiscal Year 1957-1958

July 7, 1958

The Executive Committee
American Association of Collegiate
Registrars and Admissions Officers

Gentlemen:

Pursuant to your instructions, we have examined the Cash Receipts and Disbursements recorded in the books of account of AMERICAN ASSOCIATION OF COLLEGIATE REGISTRARS AND ADMISSIONS OFFICERS for the fiscal year June 1, 1957 to May 31, 1958.

The financial condition of the Association as at May 31, 1958 and 1957 is shown in comparative form in Exhibit A.

The Income and Expenses for the fiscal years ended May 31, 1958 and 1957 are detailed in Exhibit B.

Exhibit C and supporting Schedules C-1 to C-9, inclusive, are the Statements of Cash Received and Disbursed during the period June 1, 1957 to May 31, 1958.

Comparative Statement of Condition-Exhibit A

This exhibit and supporting Schedule A-1 shows the assets, liabilities, and surplus Equity of the Association as at May 31, 1958 and May 31, 1957.

The cash balance on deposit, $23,595.56, at the Chemical Corn Exchange Bank of New York, 199 Church Street, New York City, was verified by direct correspondence and by reconciliation of statements received from the depository.

Schedule A-1 lists the investment securities on hand and counted by us as at May 31, 1958. The following is a summary of the investment account for the year:

Balance—June 1, 1957	$19,892.50
Add: Purchase of $4,000 United States Treasury—2½% Bonds—Due September 15, 1967-72	3,832.50
Balance—May 31, 1958	$23,725.00

Sundry Receivable—$13.00—is the unpaid balance as at May 31, 1958 for the 1958 Convention.

The $12,000.00 Special Purpose Reserve represents a Fund for the Advancement of Education established by the Ford Foundation. Fordham University has agreed to act as fiscal agent for the Association in the administration of the grant. The following summarizes the grant receipts as confirmed by direct correspondence with the Rev. Thomas C. Cronin, S.J., Treasurer, Fordham University:

Date Received	*Amount*
October 16, 1957	$ 6,000.00
June 4, 1958	6,000.00
Total	$12,000.00

The grant will permit the acceleration of publication of pamphlets on the educational systems of foreign countries with recommendations for placement in United States educational institutions. This fund may be expended over a period of two or three years.

Surplus Equity as at May 31, 1958 was $48,007.74 as compared with $35,345.27 for the prior year or a net increase of $12,662.47. This amount represents the Net Income in excess of the Expenses as detailed in Exhibit B.

Statement of Income and Expenses—Exhibit B

This exhibit details the income and expenses for the fiscal years ended May 31, 1958 and May 31, 1957. The current year shows a net income of $12,662.47 as compared to $10,598.21 for the prior year.

Statement of Cash Receipts and Disbursements—Exhibit C

This exhibit and supporting Schedules C-1 to C-9 review the Cash Receipts and Disbursements for the current fiscal year under review.

The cash receipts as recorded in the Records of the Treasurer were examined and all such recorded receipts were found to have been deposited in the account of "American Association of Collegiate Registrars and Admissions Officers" in the Chemical Corn Exchange Bank, 199 Church Street, New York City. Details of the cash receipts are shown in Exhibit C and supporting Schedules C-1 to C-9.

The cash disbursements as summarized in this exhibit and detailed in Schedules C-1 to C-9 were examined and found to have been charged to the appropriate accounts. A test check was made of vouchers and invoices and all were found to be in order and properly accounted for.

Schedules C-1 to C-9, inclusive, show in comparative form the actual receipts or disbursements—1957/58 budget and the budget (over) or under differences.

Comparison of Budget with Actual Receipts and Disbursements

The total receipts for the fiscal year ended May 31, 1958 exceeded the estimated budget of receipts by $4,743.95 as detailed in Schedule C-1 as compared to $5,477.69 for the prior year. The cash disbursed totaled $24,840.54. This was $7,459.46 less than the budget, $32,300.00.

The following shows in summary form the 1957/58 Budget of Receipts and Disbursements with the Actual:

	Actual	*Budget*	*Budget (Over) Under Actual*
Receipts:			
Membership	$35,335.00	$30,935.00	$ 4,400.00
Subscriptions	1,091.35	850.00	241.35
Advertising	482.98	500.00	(17.02)
Interest on Investments	519.62	400.00	119.62
Total Receipts	$37,428.95	$32,685.00	$ 4,743.95
Disbursements:			
General Administration	$ 4,983.55	$ 5,000.00	$ (16.45)
1958 Convention—Net Income	(340.66)	1,000.00	(1,340.66)
Editor's Office	7,720.78	8,000.00	(279.22)
Treasurer's Office	2,292.25	2,300.00	(7.75)

Committee on Evaluations and Standards	884.08	500.00	384.08
Committee on Regional Associations and Membership	1,590.44	2,200.00	(609.56)
Committee on Constitution and Bylaws	——	100.00	(100.00)
Committee on Special Projects	7,710.10	13,200.00	(5,489.90)
Total Disbursements	$24,840.54	$32,300.00	$(7,459.46)

Schedules C-1 to C-9, inclusive, show the Budget appropriations for the various general committees, subcommittees, and administrative functions as compared with the Actual Receipts and Expenditures incurred during the fiscal year.

Certification:

I hereby certify that the accounts of the AMERICAN ASSOCIATION OF COLLEGIATE REGISTRARS AND ADMISSIONS OFFICERS have been examined for the period June 1, 1957 to May 31, 1958; that all of the recorded cash receipts in the records of the Treasurer have been properly accounted for and deposited in the bank account under the Association's name; that all of the disbursements have been correctly accounted for; and that the attached Exhibit C reflects the receipts and disbursements for that period and the balance in the bank as at the latter date.

Respectfully submitted,

Edmund F. Bowen & Company
Certified Public Accountant
State of New York

Exhibit A

AMERICAN ASSOCIATION OF COLLEGIATE REGISTRARS AND ADMISSIONS OFFICERS

COMPARATIVE STATEMENT OF CONDITION

May 31, 1958 and 1957

ASSETS

Current Assets	*1958*	*1957*
Cash on Deposit—Exhibit C	$23,595.56	$14,248.22
Petty Cash	150.00	50.00
Deposit—Airlines	——	450.00
Travelers Cheques	300.00	450.00
Investment—Securities—Schedule A-1	23,725.00	19,892.50
Receivable—Sundry	13.00	40.37
Total Current Assets	$47,783.56	$35,131.09
Special Purpose Fund Assets		
Cash—At Fordham University	$ 6,000.00	$ ——
Receivable—Fund for Advancement of Education	6,000.00	——
Total Special Purpose Fund Assets	$12,000.00	$ ——
Fixed Assets		
Furniture and Fixtures	$ 248.18	$ 248.18
Total Fixed Assets	$ 248.18	$ 248.18
Total Assets	$60,031.74	$35,379.27

LIABILITIES—RESERVE—EQUITY

Current Liabilities		
Federal Withholding Tax Payable	$ 24.00	$ 34.00
Total Current Liabilities	$ 24.00	$ 34.00
Special Purpose Fund Reserve		
Principal—Fund for Advancement of Education	$12,000.00	$ ——
Total Special Purpose Fund Reserve	$12,000.00	$ ——
Equity		
Balance—June 1, 1957 and 1956	$35,345.27	$24,747.06
Add: Net Income Fiscal Years Ending May 31, 1958 and 1957—Exhibit B	12,662.47	10,598.21
Total Equity—May 31, 1958 and 1957	$48,007.74	$35,345.27
Total Liabilities—Reserve—Equity	$60,031.74	$35,379.27

Exhibit B

AMERICAN ASSOCIATION OF COLLEGIATE REGISTRARS AND ADMISSIONS OFFICERS

COMPARATIVE STATEMENT OF INCOME AND EXPENSES

For Fiscal Years Ended May 31, 1958 and 1957

Income	*1958*	*1957*
Memberships	$35,335.00	$34,355.50
Subscriptions	1,091.35	1,072.70
Advertising	442.61	215.11
Interest on Investments—Net	519.62	484.88
Sundry	114.43	——
Total Income	$37,503.01	$36,128.19
Expenses		
General Administration	$ 4,983.55	$ 4,575.77
Conventions (Income) Expense—Net	(340.66)	847.40
Editor's Office	7,720.78	7,152.40
Treasurer's Office	2,292.25	2,281.39
Committee on Evaluation and Standards	884.08	——
Committee on Regional Association and Membership	1,590.44	2,021.21
Committee on Constitution and Bylaws	——	——
Committee on Special Projects	7,710.10	8,651.81
Total Expenses	$24,840.54	$25,529.98
Net Income—Fiscal Year Ended May 31, 1958—To Exhibit A	$12,662.47	
Net Income—Fiscal Year Ended May 31, 1957—To Exhibit A		$10,598.21

Exhibit C

AMERICAN ASSOCIATION OF COLLEGIATE REGISTRARS AND ADMISSIONS OFFICERS

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS

June 1, 1957 to May 31, 1958

Cash Balance—Chemical Corn Exchange Bank of N.Y.			$14,248.22
Add: Cash Receipts			
Membership	Schedule C-1	$35,335.00	
Subscriptions	C-1	1,091.35	
Advertising	C-1	482.98	
Interest on Investment	C-1	536.20 "A"	
1958 Convention	C-3	13,601.00	
Sale—"Credit Given"	C-9	458.75*	
Sale "Glossary"	C-9	54.00*	
Policies and Practices	C-9	3.00*	
Sale—Tidal Wave	C-9	5.22*	
Sale—Space Utilization Manual	C-9	775.81*	
Foreign Student Credentials	C-9	19.84*	
Machine Equipment	C-9	6.00*	
High School—College Relations	C-9	1.05*	
Withholding Tax—Employees		384.00	
Airlines Deposit		450.00	
Sundry		114.43	53,318.63
Total Receipts and Beginning Balance			$ 67,566.85
Less: Cash Disbursements			
General Administration	C-2	$ 4,933.55‡	
1958 Convention	C-3	13,273.34	
Editor's Office	C-4	7,720.78	
Treasurer's Office	C-5	2,292.25	
Committee on Evaluations and Standards	C-6	884.08	
Committee on Regional Associations and Membership	C-7	1,590.44	
Committee on Constitution and Bylaws	C-8	——	
Committee on Special Projects ($7,710.10 plus starred * items above)	C-9	9,033.77	
Purchase of 4M U.S. Treasury Bonds		3,832.50	
Interest Expense on Purchase of 4M U.S. Treasury Bonds	C-1	16.58 "A"	
Withholding Tax—Director of Internal Revenue		394.00	43,971.29
Cash Balance—Chemical Corn Exchange Bank of New York—To Exhibit A			$ 23,595.56

"A"—Net on Exhibit B—$519.62
‡—Excludes $50.00 Travelers Cheques—Chapel Hill

Placement Service

AACRAO maintains a Placement Service, which serves as a clearing house for those seeking employment and those with vacancies to fill. The service is under the direction of J. Everett Long, West Virginia University, Morgantown. There is no charge for listing.

There is a fee of $3.00, however, for those who wish to publish a notice on this page. They should send with their application for listing, copy for the advertisement (limited to 50 words) which they wish to insert. For insertions beyond the first, the charge is $1.00 an issue. Remittance in full in favor of the American Association of Collegiate Registrars and Admissions Officers should accompany the application.

Correspondence, applications for listing, and inquiries about advertisements should be directed to Mr. Long. Requisitions and purchase orders should be directed to the American Association of Collegiate Registrars and Admissions Officers, in care of Mr. Long.

Neither the Association nor its Committee is an employment agency, and neither assumes any obligation as to qualifications of prospective employees or responsibility of employers. It is expected that at least some reply will be made to all those answering advertisements.

POSITION DESIRED: Registrar or/and Admissions Officer. Twenty years' experience in education administration, eleven of which were in a large university, five as Registrar and Admissions Officer. Installed and applied punched card accounting system for university. Ph.D. in Education Administration, University of Chicago. Age: 45. Married. Three children. Address TP, Placement Service, COLLEGE AND UNIVERSITY. (2/2)

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